DOCUMENT RESUME

ED 052 140

SP 004 990

TITLE	Training Instructional Teams for a Differentiated Approach to Learning: A Description of a Teacher Education Project Within the Secondary Teacher Education Program.
INSTITUTION	Stanford Univ., Calif. School of Education.
PUB DATE	70
NOTE	159p.; 1971 AACTE Distinguished Achievement Award entry
EDRS PRICE	EDRS Price MF-$0.65 HC-$6.58
DESCRIPTORS	Community Involvement, *Inservice Teacher Education, Instructional Programs, *Preservice Education, *Teacher Education, *Team Teaching
IDENTIFIERS	Secondary Teacher Education Program, STEP

ABSTRACT

The program focuses on the interaction among roles, aptitudes, and instructional functions of teachers. The goals of the program are to 1) train pre- and inservice teachers to work in instructional teams, 2) improve pupil achievement, 3) involve the local community in all phases of team activity, 4) develop a curriculum to train teachers to work in instructional teams. The project is an integral component of the Stanford University Secondary Teacher Education Program (STEP). Three instructional teams are working in local public schools, one with low income Mexican-American students, one with low income Negro and Oriental students, and one with middle income Caucasian students. Each team includes preservice trainees, master teachers who are members of the teacher education program staff, and experienced teachers. An evaluation model derived from systems analysis is used as a means for reducing the complex interaction of role-function-aptitudes to manageable units which can be evaluated at three levels of decision making: project, institutional, and extra-institutional. A major outcome of the project is reflected in the development of group process problem-solving protocol materials. These materials are designed to serve as a curriculum for teachers who are learning to work in instructional teams differentiated by teaching role and responsibility. (Author/MBM)

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Training Instructional Teams for a Differentiated Approach to Learning: A Description of a Teacher Education Project within the Secondary Teacher Education Program, Stanford University

School of Education
Stanford University
November, 1970

SP004998

Abstract

As a consequence of changes in society and the cummulative impact of educational technology, the role of the teacher is changing. Change will not make the teacher dispensable, but will alter the teacher's function in such a way as to require the usual teacher to do what only the exceptional teacher now does well. These forces for change in education suggest that model teacher education programs should be developed which capitalize on the functional uniqueness of the human teacher.

The program described in this report focuses on the interaction among roles, aptitudes and instructional functions of human teachers. A logical and empirical outcome of the role-function-aptitude interaction is increased role specialization. Instructional teams provide the means for bringing "specialists" together in order to collaboratively work to improve pupil attitudes and achievement. The program is primarily concerned with providing teachers with skills which will permit them to determine roles and functions, consistent with their aptitudes, in an instructional team. The goals of the program are to: (a) train pre- and inservice teachers to work in instructional teams; (b) improve pupil achievement; (c) involve the local community in all phases of team activity; (d) develop a curriculum to train teachers to work in instructional teams.

The project is an integral component of the Stanford University Secondary Teacher Education Program (STEP). Three instructional teams are in operation. Team membership consists of preservice trainees (STEP interns), STEP Associates (master teachers who are members of the teacher education program staff) and yeoman (experienced) teachers. Each team works in a local public school. The three public schools involved in the project draw different types of students: low income Mexican-American students; low income Negro and Oriental students; middle income Caucasian students.

An evaluation model, derived from systems analysis, is used as a means for reducing the complex interaction of role-function-aptitudes to manageable units which can be evaluated at three levels of decision-making: project, institutional and extra-institutional.

A major outcome of the project is reflected in the development of group process problem-solving protocol materials. These materials are designed to serve as a curriculum for teachers who are learning to work in instructional teams differentiated by teaching role and responsibility.

Forward

Whether we like it or not we are in a period of instability, disruption and societal reformulation. The Times, in particular, question the practice of schooling and its administration in our society. Increasing numbers of books and articles have appeared that describe the inadequacies of public schools, teachers and the institutions in which teachers are educated. Contemporary educational institutions and instructional practice seems to treat students as passive, teacher-controlled units. Emphasis does not seemed to be placed on increasing student competence and power over the control of his own learning processes.

The public has a great stake in public education and a need for competent teachers. Few teacher education programs have adapted their curriculum in a programmatic way to cope with emerging and current societal needs. What are teacher education programs doing that is significantly different from what they did five years ago to train teachers to instruct students from low income areas? What authentic differences are there between programs designed to train students to work in low income areas from those training teachers for suburbia? According to Tannenbaum and Hess (1970) there are very few, if any, differences.

Directly or indirectly, teacher education programs are charged with "failure" to develop personnel that can assist the student in the process of learning how to live a creative, humane, and sensitive life. While this failure is related to a complexity of societal factors, it represents a complex problem for educational researchers as well.

> There are many kinds of ability to learn and we will have to make strides toward sorting them out. It is not new to suggest that different students should be taught by different methods. What is new is to offer the possibility of systematic research that will, in time, define clearly identifiable types of students and distinctive educational environments suited to each type (Cronbach, 1970, p. 14).

As the extent and complexity of the need to educate children, particularly those from low income areas, has become more evident, it has become equally obvious that the problem will not be solved by simply tinkering with existing programs. Any effort at solution must reconsider the role of the teacher, the institutions that educate and hire him, and their relationship to the effectiveness of the services offered.

As a consequence of societal change and technological breakthroughs, the role of the teacher is changing. Differentiated staffing, new school design, flexible scheduling, computer assisted instruction, etc., are all forces which call for increased specialization of function on the part of educational personnel. Because of these developments the teacher will be freer to spend his time on the things that a teacher can do best, such as helping students to initiate inquiry, to gain a favorable image of himself as a learner, and to acquire the skills of effective participation with others.

Instructional practice and teacher education will be greatly affected by instructional technology because the things that the teacher now spends most time on may well be the tasks for which the teacher is least needed. Computer-assisted-instruction will not, for example, make the teacher dispensable, but will alter the teachers's function in such a way as to require the usual teacher to do what only the exceptional teacher now does well.

Teacher education programs have been rationalized, developed and evaluated largely on the assumption that teachers work as individually elaborated autonomous teaching units. There has been little preservice work to develop programs designed to provide teachers with skills to work as members of instructional teams. Furthermore, little attention has been paid to the need to help teachers, consistent with their aptitudes, do what they can do uniquely well. Considering the literature that has emerged in recent years on these topics, it is surprising that programs dealing with these concerns have not developed. This fact as well as concern for the present movement away from humane and toward mechanistic tendencies in education in the name of research and educational technology, led to the present inquiry.

This project, within the Secondary Teacher Education Program, Stanford University, proposed that preservice and inservice teachers be trained together as instructional teams. In addition, within each instructional team members would endeavor to determine what it was that they could do uniquely well and then systematically assess the effect of their skill on team function and on pupil achievement and attitudes.

Work on this project started during the summer of 1968. Preliminary pilot programs were initiated to ascertain the value of having preservice and inservice teachers work collaboratively in "learning" teams. In collaboration with the Stanford Center for Research and Development in Teaching, this project officially began June, 1970, under a preliminarey enabling grant under the provisions of the Education Professions Development Act, United States Office of Education.

The project was developed by Professor Robert H. Koff and the Teacher Education Program faculty and staff. Professor Richard Shavelson is the project coordinator and senior staff member. Four doctoral students in the school of education, Richard Beyer, Annalee Elman, George Sousa, and Carol Cordori, along with Thomas Lorch, a post doctoral fellow, and Mrs. Ethel Lichtman have worked extensively on the project. They, prepared the group protocol materials and served as the nucleus of the training-research-development and evaluation team.

Professor William Iverson, Chairman of the Committee on Teacher Education, and Professors Tucker, Gross, Politzer, Grommon, Higgins, Branca, Bridgham, Kuhn and Kyme have been very helpful and carried primary responsibility for professional education course work in curriculum and instruction. And, finally, acknowledgement should be made to the three teams who were the active participants of this effort to explore the relationships between instructional team activity and changes in pupil attitudes and achievement.

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November 23, 1970

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I

INTRODUCTION

Training instructional teams for a differentiated approach to learning is an integral component of the Stanford Secondary Teacher Education Program (STEP). Funded under the provisions of the Education Professions Development Act, this project within a program has evolved out of research and development efforts originating within the Stanford teacher education program and out of the recent research and development activities of the Stanford Center for Research and Development in Teaching. The purpose of this document is to describe the current instructional team training program and the theoretical, experimental and practical framework from which it developed.

II

DEVELOPMENT OF THE INSTRUCTIONAL TEAM PROJECT

Brief History of the Secondary Teacher Education Program

From 1959 to 1964, two teacher education programs were offered by the Graduate School of Education, Stanford University. One was a "typical" student teaching program and the other, through the aid of a Ford Foundation grant, evolved a new approach to teacher preparation; the Secondary Teacher Education Program (STEP). STEP was designed to provide prospective teachers with the opportunity to engage in academic and professional education course work and simultaneously gain practical teaching experience in secondary schools as paid "faculty members." After five years of carefully evaluating the effects of the two programs, the student teaching program was discontinued and STEP became the School of Education's primary vehicle for preparing prospective secondary school teachers.

STEP was designed as a fifth year, twelve month program leading to a Master of Arts degree in Education and a Secondary Teaching Credential. The program was organized around three programmatic strands: academic, pedagogical, and practical. Each strand accounted for approximately one-third of the program's curriculum.

Since 1964, STEP has served as a laboratory for conducting basic, applied and operational research in teacher education. The STEP program has worked in close cooperation with the Stanford Center for Research and Development in Teaching. Innovations such as microteaching have been researched, developed and evaluated within the STEP program. Continued research and development, firmly rooted in the practical world of teacher education, is a continuing and increasingly necessary need if current and anticipated problems of instruction and learning in the 1970's are to be ameliorated. The Stanford teacher education program is continuing its research and development efforts to achieve excellence in teacher education.

Theoretical Considerations for Training Instructional Teams

1. The Role of the Public School Teacher:

The professional educator has for years generated powerful rhetoric about the teacher and his role, but few attempts have been made to determine what it is that a particular teacher is best qualified to do on the basis of his aptitudes and observed performance. Little attention has been paid to the task of integrating the demands of the school organization and the demands of the professional staff in a manner that is at once organizationally productive and individually rewarding.

Schools are complex social organizations. The structure of the social relations in the school includes norms, values, and other orientations shared by school personnel. The most important subunit of the school organization may well be the element of role. Role is the structural component defining the behavior of the individual who works within the organization. Roles are assigned statuses within an institution and are defined by specific expectations. A role carries with it certain normative rights and duties. Role defines for the individual what he should do under certain circumstances as long as he is the incumbent of the particular role. The behaviors associated with the role may be thought of as lying along a continuum from "required" to "prohibited." The school and community specify that certain expectations are held to be crucial to the role of teacher, and that particular behaviors are required of the incumbent.

Very little effort, until recently, has been made to begin to integrate the role expectation for teachers with their individual personality and aptitude characteristics. Most, if not all, teachers have difficulty in carrying out all the role expectations generated by the institution in which they work. The behaviors which teachers display and the effect teachers have on students are dependent to a high degree on the individual competence of the person involved. Some teachers, for example, may demonstrate creativity and skill in their ability to develop or modify curriculum. The same individuals, on the other hand, may find it quite another matter to teach the curriculum they have developed without assistance. Training programs need to allow for flexibility in role expectations, aptitude, and personality.

Over the last fifty years, role expectations for teachers have not changed significantly. The teacher, working with 30 students, is supposed to be able to tutor, teach in small and large groups, lead discussions, lecture, develop teaching materials in all subjects, prepare audio-visual aids, and so on. In short, the teacher is still expected to be all things to all people. This expectation is, of course, unreasonable and results in dissatisfaction on the part of the teacher, as well as frustration on the part of students, parents and administrators. Better understanding of reasonable role expectations would significantly enhance teacher effectiveness.

2. The Teacher in a Differentiated Approach to Learning

This project is concerned with differentiating the role of the teacher in a way consistent with two major concerns which are at once independent as concepts and interactive as phenomena. The first concern consists of institutional demands defined by role expectations designed to fulfill the goals of the educational system. The second concern is individual aptitude-personality characteristics, whose interaction with role determines instructional behavior. The project's aim is to train teachers for particular instructional roles based on individual aptitude-personality characteristics. Efforts are directed toward encouraging schools to develop significantly new teacher roles which are both realistic and productive.

It seems clear that schools are increasingly likely to have differentiated staffing needs. For example, with the development of programmed learning, computer-assisted instruction, and other measures to individualize instruction, teachers will be freer to spend their time on the things that they can do uniquely well, such as helping students to initiate inquiry, to gain a favorable image of themselves as learners, and to acquire skills of effective participation with others. The things that the teacher now spends most time on in his training may very well be the tasks for which the teacher soon will be least needed. The training program described in this paper is responsive to newly differentiated responsibilities and instructional practice.

3. The teacher as a member of functioning groups

From a socio-psychological point of view there are at least four major components in formal education that interact in the process of teaching-learning: subject matter (its appropriateness, arrangement and difficulty level for the learner), the learner (his readiness to learn), the teacher (who is by some means to facilitate learner-subject matter interaction), and the community (the socio-economic context in which instruction occurs and where decisions are made concerning what is ultimately taught in schools). Presented here, by way of summary and synthesis, are some of the evidences we have found useful from the field of group dynamics and the work of the Stanford Center for Research and Development in Teaching in examining these components as they relate to the differentiated instructional team concept.

As schools and instructional problems become more complex, the activities of teachers become increasingly interwoven and interdependent. It becomes increasingly important to plan with others, to agree on common goals and policies, and to develop methods and techniques appropriate to deepening communicative interaction. A prominent feature of school staffing patterns is the proliferation of small groups, committees, and conferences which act as agents for planning and evaluating. Schools have, of course, always functioned as small units; for example, department and classroom. The current trend is not simply toward the proliferation of small groups but also toward their incorporation within formal product-oriented structures that contrast sharply with earlier informal personally oriented structures. Groups have ceased to be solely instruments of accommodation; they have also become agents of change (Bennis, Benne, & Chin, 1969).

The differentiated instructional team is viewed as a change agent to the extent that it (1) will deal with problem elements felt by teachers to exist in their professional lives, and (2) will help teachers be successful in carrying out the actions they envisage. The differentiated instructional team is also viewed as a personal accommodation group; through its activities it is hoped individuals will sharpen their purposes, reduce anxieties, and become more certain of their own identities (Bradford, Gibb, & Benne, 1966). Since the instructional team simultaneously serves different purposes, its operation becomes quite complex and thus presents major challenges to theory and practice.

Experimental Project, 1968

Consistent with STEP's orientation to research and development in teacher education, an experimental project was initiated in Summer 1968 which served as pilot work for the project described in this report. The basic training approach was one of collaborative problem-solving undertaken jointly by trainees, their pupils, and members of the training staff. The role of the staff was to provide experiences which stressed interpersonal interactions common in schools and to provide trainees with first-hand experiences which they could understand and draw upon for tentative policies in teaching.

The content of the training program focused on the behavior of the trainee as well as on the "established knowledge" available about teacher-student interaction, curriculum and instruction, and the school as an institution. Several assumptions guided the development of training materials and procedures. These were:

(a) there are theoretical models available for analyzing interactions between teacher, student, subject matter and community;

(b) the classroom is a social system with its own norms, values, roles, status positions and structures;

(c) the teacher must be able to diagnose and evaluate the social system in which he is a vital participant;

(d) informal classroom groups processes affect students' attitudes as well as their academic performances, and teachers can modify these group processes constructively;

(e) there are spontaneous natural human tendencies which, when given relatively free play, will generate or facilitate meaningful learning and retention.

The project was structured to develop applicative and interpretative skills of trainees with respect to four areas: community, subject matter, students and self. Readings, discussion, laboratory exercises, field work, etc. were designed for each area. Additional training experiences were developed to assist the trainee in making linkages between these areas; to illustrate how community students, subject matter and one's own ways of behaving affect instructional situations and learning.

From the first week of the course to its end, interns worked in "learning teams." The 40 interns were divided into 8 teams. Each team was composed of 5 interns and had as a resource a curriculum and instruction specialist. Information obtained from a pre-training questionnaire and from interns was used to help form the teams into what we loosely called teachability-groups (Thelen, 1968). Each team was evaluated in terms of the products they turned out; if a group product received a grade of B, then all individual members of the team received a grade of B. Each team had the following responsibilities:

(a) To conduct a community study of the high school attendance area in which they were to teach in the Fall.

(b) To develop and pilot a curriculum unit, within the micro-teaching situation, that was consistent with any one of a variety of curriculum models.

(c) To write a case study that described the individual pupils and the social system of their micro-teaching situation.

(d) To write a case study which examined their own learning team. How it grew in its ability to diagnose and develop alternative ways of solving problems--problems specific to solving tasks assigned to the team, and problems related to involving team members in this process.

Each team worked as an autonomous unit. For resources, each team had available to it a video tape recorder and playback unit, and a class of 10 paid pupils that met for a total of 4 hours per week. Each week teams were given assignments that required them to spend one hour teaching a particular topic that emphasized technical skills of teaching (asking higher order questions; reinforcing student participation, etc.). Assignments were made, in consultation with team members, by examining the data that the team had collected the previous week. Data were collected by team members in a variety of ways. The procedure was as follows:

First, interns decided who would teach a particular lesson. Team members not actually teaching had specific roles to play. At least two members observed their colleague teach and made ratings consistent with the Flanders Interaction Analysis system, the OSCAR, or some other observation system. On other occasions the team members designed an evaluation instrument, observed one particular student, administered a sociometric questionnaire, interviewed a student after the lesson using stimulated recall procedures, etc. Teams were assisted in viewing video tapes, lesson critique and synthesis of data by staff members. The data collected by the team and the subsequent staff team's interpretation of it resulted in plans for the next training activity. In effect, the learning teams functioned as differentiated teaching staffs, since by the end of the training period team members were performing tasks for which they had demonstrated the greatest conpetence.

Learning team activities occupied a significant percentage of the intern's time. They did, however, participate in a variety of other activities that were designed to acquaint them with theory, build observational skills, or teach specific instructional techniques, such as role playing. Once a week all teams formally responded to one another about their activities and date collection efforts. In these sessions the teams had an opportunity to see how others perceived and coped with complex instructional problems. Lectures, movies, discussions and training exercises were also provided that dealt with community study, test and measurements, crisis resolution, etc. These sessions were designed to acquaint interns with principles for diagnosing and evaluation the teaching-learning environment. The everyday operation of the learning teams provided the laboratory for applying, testing and discovering additional or possibly new principles.

Evaluation was built into the experimental project (see Appendix A for an example instrument). Although the group processes training component was evaluated indirectly, the evaluators found that

> There was a definite change in rankings of the Group Building and Maintenance Roles. The teacher's roles as a group coordinator (i.e., encourager, supporter, etc.) were ranked relatively more important on the post-test [than on the pre-test]. This finding is very consistent with the emphasis on group dynamics and inquiry in the training program (Koff & Clark, 1970, p. 186).

Consortium of Bay Area Schools and Stanford's School of Education

The 1968 experimental project served as the research basis for a proposal to the Staff Personnel Utilization Program funded under the Education Professions Development Act (EPDA). The practical base for the project was provided in the Spring of 1969 by a consortium consisting of school districts in the Bay Area and Stanford University's Graduate School of Education. The purpose of the consortium was to build collaborative problem solving efforts amoung its membership and to begin to plan and establish needed training experiences for the consortium's educational personnel. The consortium membership felt that instructional teams appeared to provide the most flexible and effective solution to many of the diverse instructional and training needs represented by the membership. The members of the consortium submitted "mini-proposals" for the implementation of instructional teams to meet their particular needs. After the evaluation of the proposals by the consortium, three proposals were selected for funding. One team was to teach low income Negro and Oriental pupils; a second team was to teach low income Mexican-American students; the third team was to teach middle income Caucasian students. A detailed description of the teams, students, schools, and communities is given in the next section.

Training Instructional Teams for a Differentiated Approach to Learning

As a consequence of the findings of the 1968 experiemental project and the recommendations of the consortium, a project to train instructional teams was formulated. The ultimate objective of the project is to increase meaningful learning and positive attitudes in the classroom.

The immediate objectives are:

1) to train teachers to work in teams with members differentiated by function;
2) to develop training materials which can be disseminated to other training projects;
3) to strengthen links between school districts, their communities, and Stanford University; and
4) to develop an evaluation model and use it to evaluate the project.

The following sections of this report describe in detail the project, its objectives, personnel, and evaluation. The final section describes this program's distinctive contribution to the improvement of teacher education.

III

Description of the Project to Train Instructional Teams

The project incorporates the academic and pedagogical strands to STEP and expands the practical strand in training teachers to work in instructional teams. The organization of the project is shown schematically in Figure 1. The description will begin with STEP and move down the schematic, ending with a description of each team's activities in the classroom.

The Secondary Teacher Education Program (STEP)

Basic Beliefs and Objectives. Teacher education at Stanford is concerned with the improvement of the quality of classroom instruction. The Stanford Secondary Teacher Education Program (STEP) provides comprehensive training in the skills of instructional interaction and design. The program assumes that: (a) there are theoretical models available for analyzing interactions between teachers and students; (b) teachers can use these models to develop instructional strategies; (c) teachers must have a working knowledge of the subject matter they teach (See appendix B for more detail).

Program Content and Organization. STEP has three curricular "strands"; academic, pedagogical, and practical. Each strand accounts for approximately one-third of the teacher education program curriculum.

The academic strand has been one of the strongest components. Academic departments have continued to offer course work to trainees and in some cases, an opportunity to obtain a Master's degree; 9-15 units are required in this strand.

The pedagogical strand consists of professionsl course work in education: curriculum and instruction, foundations of education (history, philosophy, psychology, and sociology). Twenty-two units are minimally required in this strand.

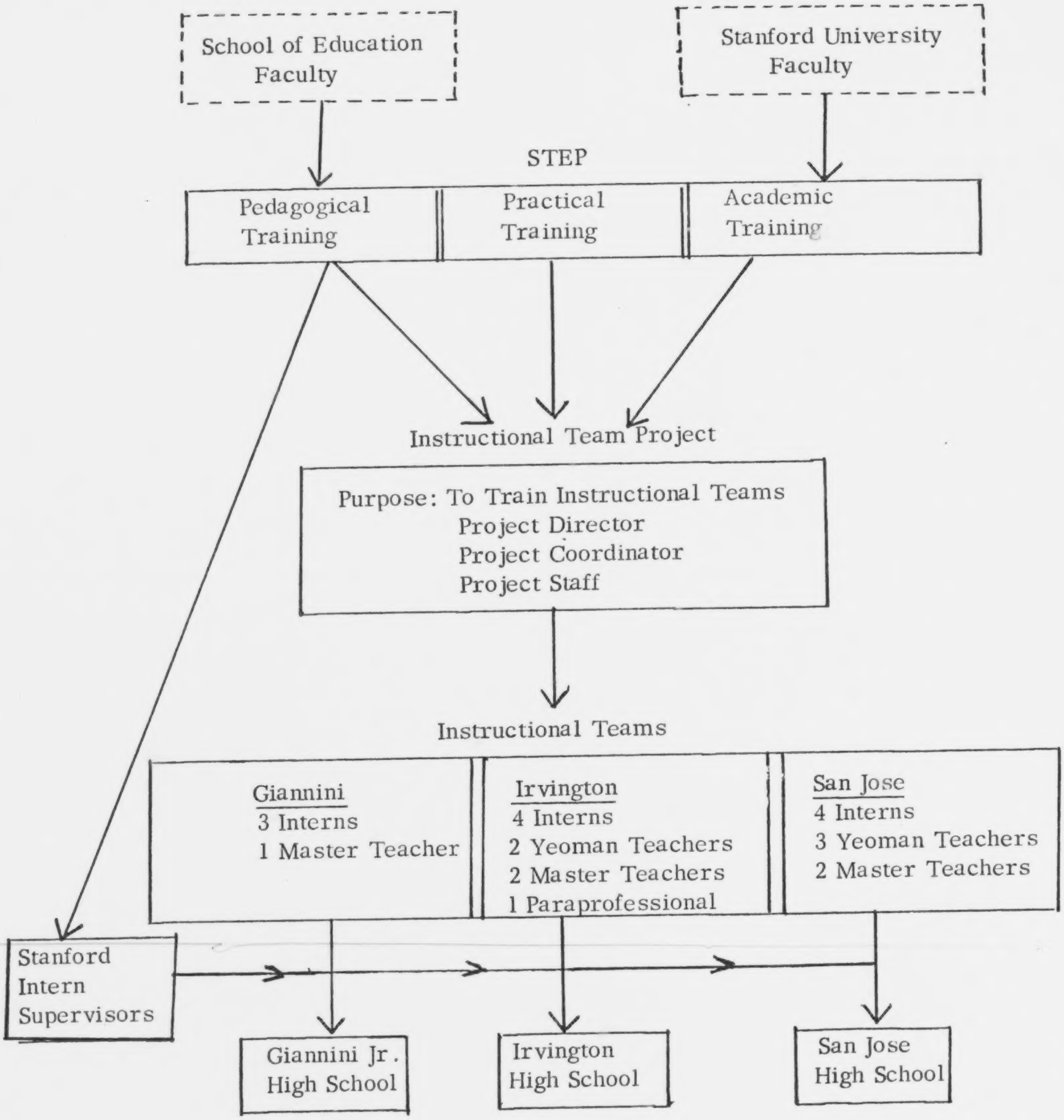
School of Education Faculty
Stanford University Faculty
STEP
Pedagogical Training
Practical Training
Academic Training
Instructional Team Project
Purpose: To Train Instructional Teams
Project Director
Project Coordinator
Project Staff
Instructional Teams
Giannini
3 Interns
1 Master Teacher
Irvington
4 Interns
2 Yeoman Teachers
2 Master Teachers
1 Paraprofessional
San Jose
4 Interns
3 Yeoman Teachers
2 Master Teachers
Stanford Intern Supervisors
Giannini Jr. High School
Irvington High School
San Jose High School

Figure 1. Schematic of Project Organization: Training Instructional Teams for a Differentiated Approach to Learning

The practical strand consists of an internship in a local school. Internships are contractual arrangements made between students enrolled in STEP and a local school district. These internships pay on the average $2,300 for teaching two class periods a day, five days a week, for the school year. A total of eleven academic units are granted over three quarters.

The interns are supervised in the local school situation by Stanford and resident (local school) supervisors. Resident supervisors are selected jointly by Stanford and the local school and receive a stipend for their services. Stanford supervisors are doctoral students generally drawn from the curriculum and instruction fields.

Experimental Project: Training Instructional Teams for a Differentiated Approach to Learning

Project Rationale. The purpose of the project is to train teachers (interns, teachers, master teachers) to work as instructional teams. The ultimate objective is to increase learning and positive attitudes in the classroom. The immediate objectives are:

1) to train teachers to work in teams with members differentiated by function;
2) to develop training materials which can be disseminated to other training projects;
3) to strengthen links between school districts, their communities and Stanford University;
4) to develop an evaluation model and apply it to evaluate the project.

Training instructional teams is essentially concerned with differentiated staffing, but from a functional rather than a structural conception. Differentiated staffing creates a certain degree of role diversification. Role diversification implies differentiated function and hence, a certain degree of specialization. When individuals with different skills and degrees of responsibility come together in a common cause, it may be said that their work activity is dependent upon a collective effort. For a common goal to be reached, each individual with special skills must complete his work and coordinate his activities with others. In short, specialization of function creates functional interdependence among individual group members.

In our view, functional interdependence is a basic construct of differentiated staffing. Functional interdependence means that those with specialized skills must coordinate their activities with other colleagues who have differing responsibilities and complementary specialized skills. Individuals must work together as a group with a common goal, improving the quality of instruction to their students.

Team Training Component. This component provides specific training to interns, teachers (termed yeoman teachers), and master teachers for teaching as instructional teams. The emphasis is on the application of principles from social and instructional psychology, group processes, and evaluation to instructional team teaching. This component was designed to train three teams of teachers to instruct students from three different school districts. One team teaches low income Negro and Oriental students; a second teaches low income Mexican-American students; the third team teaches middle income Caucasion students.

The major training task was to provide each team with the tools to allow it to adapt flexibly and collaboratively to its unique instructional setting. This requirement has been met, in large part, by providing each team with experiences that were designed to teach them how to work as members of a functionally interdependent group. Much of the training curriculum consists of what we have called Group Process Problem Solving Protocol Materials (see Appendix C for an annotated outline).

The development of the group processes protocol materials is firmly rooted in research, development and training from the field.

of group dynamics. For example, an instructional team is assumed to function as a social unit that has the task of developing, presenting and evaluation its curriculum. In addition, the classroom is viewed as a social system which has its own values, status positions, and structures. Another assumption underlying the construction of the protocol materials is that within a group, individuals fulfill different roles depending on the task, the structure of the group, and their individual abilities. The consequence of this last assumption is that the protocol materials have to provide the instructional teams with the ability to change with each new task. As a consequence of task change, the structure of the group also changes, and different abilities become relevant.

The protocol materials provide training in four critical areas of group problem solving; 1) perception; 2) task, roles, decisions; 3) problem solving; and 4) group maintenance. Although the packages are set up in a linear fashion, the processes with which they deal are not linear. The packages were established in this fashion for developmental and instructional purposes.

The protocol materials are built on a five stage model of problem solving. This model is introduced immediately, and provides a continuous framework and point of reference throughout the program. The five stages are:

1. problem sensing,
2. problem definition,
3. decisions about how to proceed;
4. generation of alternative solutions ;
5. evaluation of alternatives and decisions.

The training program is divided into two parts. The first is general, theoretical and cognitive; the second is specific, practical, and applied to actual situation. The instructional team members go through the processes of problem solving and group dynamics included in the program twice; first to master the concepts and techniques involved, and again to apply them to actual situations. The first part makes extensive use of predetermined exercises; the second generates the content of the exercises from the participating teams. The first part provides a highly structured, non-threatening learning situation; the second reintroduces the complexities of actual tasks and personalities.

In addition to the Group Processes Problem Solving Protocol Materials, the participants receive instruction in the general areas of social psychology and evaluation. Rather than discuss this instruction here, examples of instructional materials may be found in Appendix D.

A schematic of the organization of personnel in this component of the training project is given in Figure 2. Appendix E contains a short resume of each individual on the training staff.

Instructional Teams. To select schools for participation in the project, six of the school districts in the consortium (see the discussion of the consortium in the previous section) submitted "mini-proposals" for using instructional teams. From the six districts, three school were chosen; each represented a school district. The following selection criteria was used (only general categories are mentioned):

1) Adequacy with which team objectives were stated.
2) Adequacy with which the objective could be implemented.
3) Budget
4) Staff
5) Qualifications of instructional team members.

Three schools were selected: Giannini Junior High School (San Francisco), Irvington High School (Fremont), and San Jose High School (San Jose). Appendix F contains their "mini-proposals."

In general, each instructional team is composed of three or four interns, two STEP Associates (a member of STEP who was chosen for his outstanding work in his school and community), and yeoman teachers (experienced teachers). The interns are teachers-in-training in STEP. They have an undergraduate major in an academic field, an under-

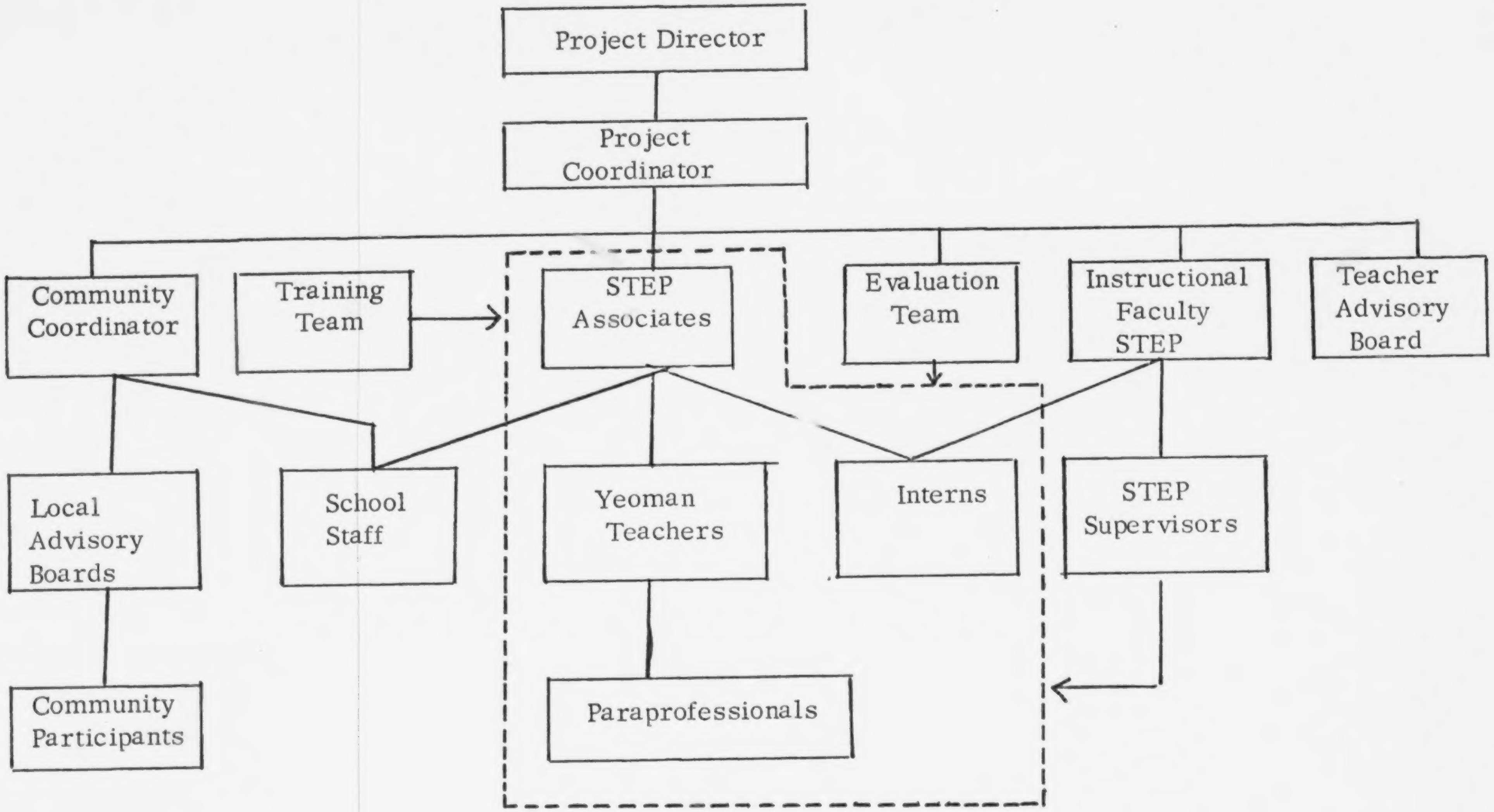
Project Director
Project Coordinator
Community Coordinator
Training Team
STEP Associates
Evaluation Team
Instructional Faculty STEP
Teacher Advisory Board
Local Advisory Boards
School Staff
Yeoman Teachers
Interns
STEP Supervisors
Community Participants
Paraprofessionals

Figure 2. Project Organization Chart

graduate grade point average above B, average Graduate Record Examination scores above 600 and 550 on verbal and quantitative subtests respectively. The interns are receiving their STEP "practical strand" training in the instructional teams.

The STEP Associates are master teachers holding at least an MA and having a minimum of five years teaching experience. They have primary responsibility for instructional team leadership and training. In this way, the instructional team receives training from the STEP Associates in areas particular to that team's needs. So, the project training component described above provides training common to each team; the STEP Associates provide training individualized to their team's needs.

The yeoman teachers have at least two years of previous teaching experience and provide additional instructional support for the team. Finally, the Stanford supervisor provides consulting support to the team and especially to the interns at the classroom level (see Figure 1).

Instructional Teams in the Classroom

The foregoing general description of the instructional teams is an over-simplification for the sake of clarity. The complexities will become apparent with the following brief description of each team at the classroom level.

Instructional Team at Giannini. This team includes one STEP Associate and three interns. The team teaches general music to the entire seventh grade (over one year period of nine week modules) and to elective eighth grade students. In addition, individual team members provide special instruction in their specialty to students interested in various performing ensembles.

The team combines individual skills of its members with an experimental curriculum. Certain members are "vocalists," certain members are "instrumentalists." The members pool their skills to offer expert instruction in a large number of areas in music. In addition to a "traditional" curriculum, the team is experimenting with Orff and Kodaly methods to determine their effectiveness and adaptability to junior high instruction. For example, Orff rhythms using drums to send and return "messages" have potential for motivation and skill building.

The objectives for this team include: 1) improved achievement and attitudes toward music, 2) improved enrollment in elective music courses, 3) development of a curriculum capitalizing on individual skills and new concepts, 4) development of closer relationships between music and the humanities, and 5) dissemination of their progress to teachers of general music and the community at large.

Instructional Team at Irvington. This team includes four interns, two yeoman teachers, two STEP Associates and a paraprofessionsl. The team teaches a combination of science and English ("Scilish") to 180 student. The team has developed a coordinated curriculum combining science and English. Each member has responsibility for a small group of student in his academic area and gives large group lectures in his area of specialization. As an example of the curriculum developed, one unit consisted of instruction of a science unit on the physiology of the ear (science) while the science fiction novel, "Fantastic Voyage," was presented as the corresponding English component.

The objectives for this team include:

1) that students develop an awareness of the interrelations between various fields of knowledge,
2) that students broaden the scope of their writing,
3) that students increase their ability to observe,
4) that students develop their ability to attack problems in more than one way,
5) that students overcome their dislikes and fears of English and science,
6) that students become familiar with the psychic and somatic courses of human action, and
7) that students develop their imaginations.

Instructional Team at San Jose. This team includes four interns, three yeoman teachers, and two STEP Associates. These teachers represent the following curriculum areas: English, science, social studies, mathematics, and reading. The organizational theme for the team's curriculum is Urban Studies. 144 students are involved in an examination of the San Jose community. The first step in this curriculum was to have the students collect data from all areas of community functioning (business, government, etc.). This data serves as a base for instruction in each of the curricular areas listed above. One advantage of this instructional team setting is that it permits small group and tutorial instruction in reading for the low income Mexican-American students who make up 99 percent of the class.

The objectives of this team are: 1) an average of two years growth in student reading skill in one year; 2) improved achievement in other language skills, social studies, science, and mathematics; 3) absenteeism reduced from 20 percent to 10 percent; 4) reduced cutting of classes; 5) student ability to apply what they learn in problem solving situations; and 6) a rise in student achievement to levels of minimum competence as described on standardized tests.

School/Community Coordination

If it were possible, the background in Figure 1 would be "colored" school/community context. This is to acknowledge the importance of this context to the success of each team. School faculty and interested community members have been given an opportunity to assist in designing, implementing and evaluating the project. The project maintains communication with faculty and community through dissemination of written information, formal and informal personal contact, and special programs. For example, at the time this report was written, the Giannini team gave a concert demonstrating to the faculty and community skills their students have acquired in their experimental curriculum.

IV

Evaluation Model for the Instructional Team Project

Introduction

The purpose of this section is to describe the evaluation model developed for and applied to the project. First, the theoretical components of the evaluation model are described. Second, a detailed description of the systems analytic approach to evaluate the project is provided. Third, each subsystem charted for evaluation is reviewed according to data collected; relationships among subsystems are articulated. In conclusion, preliminary results are presented and findings discussed.

The evaluation model developed for and applied to this project represents a foray into a complex and difficult area. Teacher education has for many years been unresponsive to the need for careful evaluation of training programs and "product" quality. Most educational research in this area has viewed the teacher rather than the pupil as the dependent variable. Interest has been focused on whether the teacher's behavior has changed rather than the effect the teacher has on changing pupil behavior.

Theoretical Components

This project is concerned with evaluating the effects of instruction on pupil achievement and in determining to what extent such effects can be related to instructional team effort. Instructional team effort is defined as the collective behavior of the team. Each team is composed of members who have assumed particular roles and responsibilities specific to improving the quality of instructional services offered to pupils. The project is directed toward determining what team members actually end up doing, in functional terms, and how consistent or inconsistent function is with team member aptitudes. For example, a function-by-role analysis of the team might show that some members develop evaluation instruments and others explain complex problems to students. We seek to determine what the unique functions are that develop out of instructional team interaction and what aptitudes individuals have that allow them to perform a team function uniquely better than other members of the team.

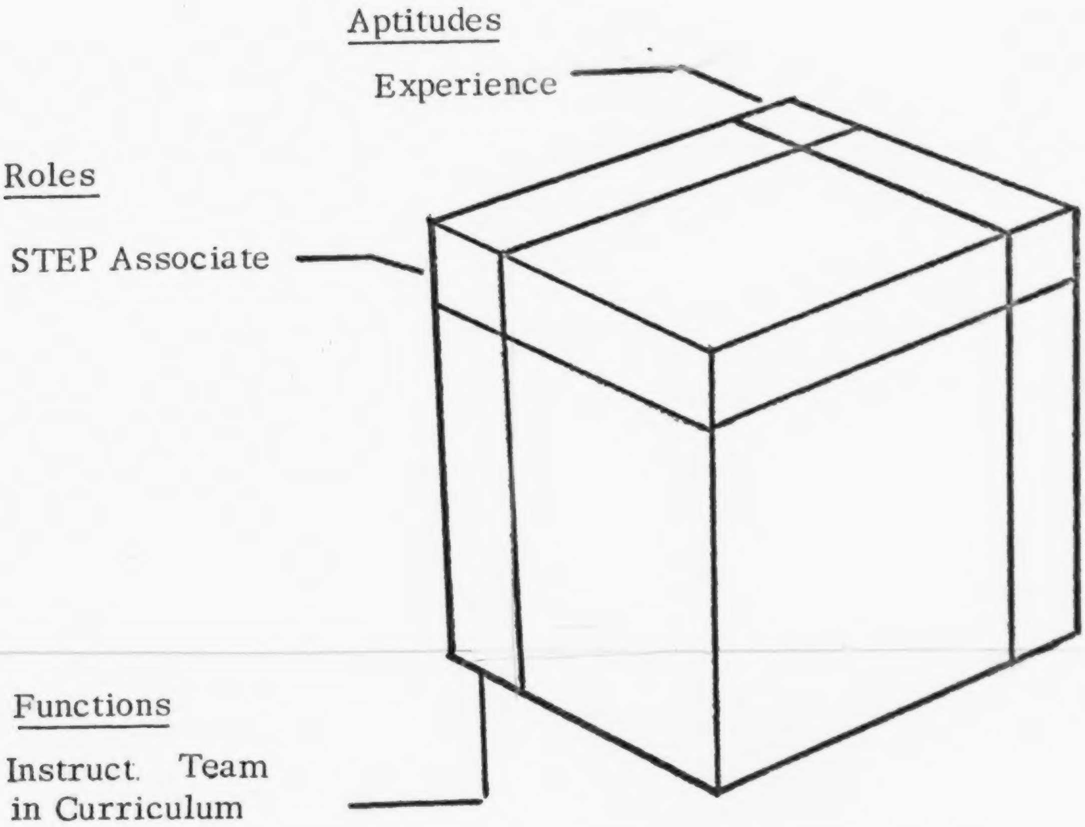
Aptitudes
Experience
Roles
STEP Associate
Functions
Instruct. Team in Curriculum

Figure 3. Three-Dimensional Model : Aptitudes-Roles-Functions

Our aptitude[1] -role-function approach is schematically mapped in Figure 3. Any one cell represents a specific combination of an aptitude, a role, and a function. In Figure 3, the interaction of experience with the role of STEP Associate with the function of instructing the team in curriculum development is shown.

Since all three dimensions interact at each phase of the team's development, systems analysis serves as a useful tool for designing an evaluation of this complex model. In order to provide the reader with a working knowledge of the systems approach to evaluation applied to this project, a detailed description of the systems theory employed to design the evaluation is provided below.

Systems Analysis Applied to Educational Evaluation

A system is defined as a set of components, together with relationships between the components and their attributes. Different sets of components may be arranged hierarchiacally into subsystems. These subsystems are designated as the Central subsystem, the Reference subsystem, and the Support subsystem (Wallace & Shavelson, 1970). The following description applies these concepts to an example evaluation.

In a curriculum evaluation project, the Central subsystem would be the curriculum and the students. The term Central is used to suggest that this subsystem is of principal concern. All other subsystems exist to support the Central subsystem. The Reference subsystem interacts directly with the Central subsystem and thus exerts the greatest influence of any environmental factor. In this example, the Reference subsystem would consist of teachers and instructional media prescribed by the curriculum. The Support subsystem exerts an indirect influence on the Central subsystem by directly influencing the Reference subsystem, thus creating a hierarchical relationship. In our example, the Support subsystem would be the curriculum developers.

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[1] "Aptitude, pragmatically, includes whatever promotes the pupil's (teacher's) survival in a particular educational environment, and it may have as much to do with styles of thought and personality variables as with the abilities covered in conventional tests." (Cronbach, 1967, p.24).

A system comprises the "processes" through which any person (or thing) entering must pass and exit when outcomes have been achieved. Thus, a system analytic model requires identification of inputs, processes, and outputs for each of the three subsystems--central, reference, support. These elements provide the basis for the model shown in Figure 4. The solid arrows show the direction of relationships between flow through the subsystems and flow between subsystems. The broken lines show the feedback throughout the entire system.

This skeletal model suggests analytic procedures for an evaluation program. The first procedure is to determine precisely what is to enter the system at all levels. If a curriculum is being evaluated with certain students, both the curriculum and the students must be described in full. In addition, the model indicates that the teachers (reference subsystem) and administrators [or curriculum developers] (support subsystem) must be considered as part of the entire evaluation program. Given the inputs to the system, the processes through which the inputs pass must be identified specifically. The output section makes explicit every type of outcome to be realized by the system. For education, specification of output in terms of performance criteria is necessary but not sufficient. Any behavior, measurable or not, should be indicated if considered relevant (Wallace & Shavelson, 1970, pp. 150-152).

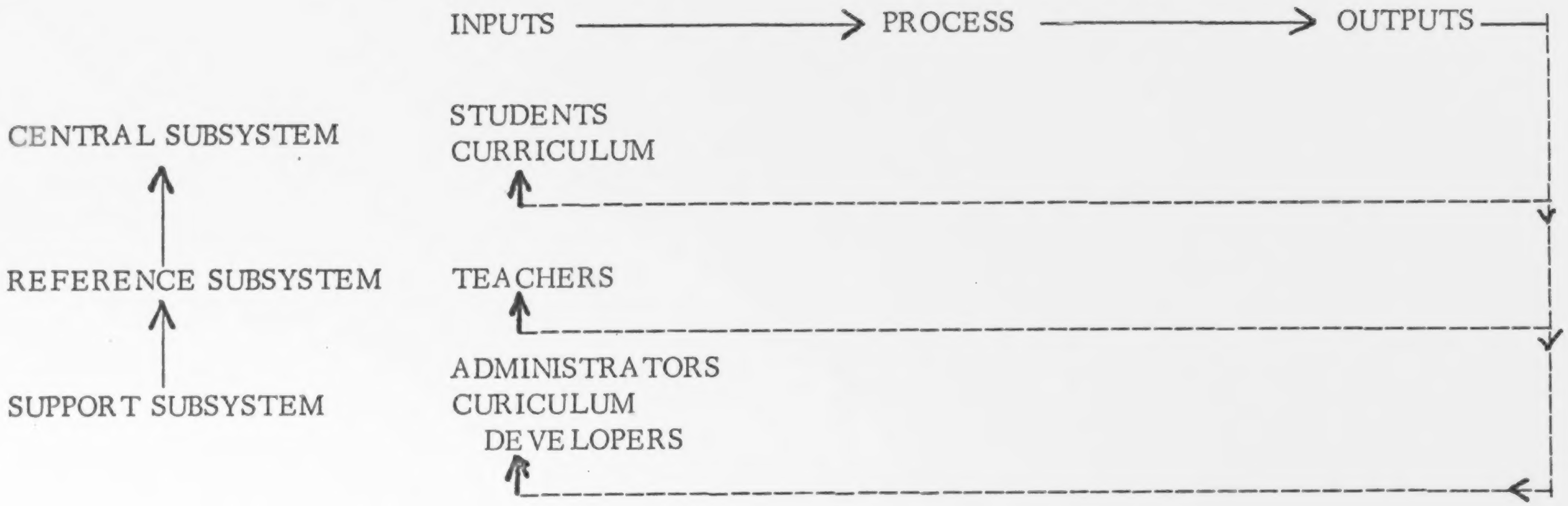

INPUTS
PROCESS
OUTPUTS
CENTRAL SUBSYSTEM
REFERENCE SUBSYSTEM
SUPPORT SUBSYSTEM
STUDENTS
CURRICULUM
TEACHERS
ADMINISTRATORS
CURICULUM
DEVELOPERS

Figure 4. Skeleton View of a Systems Analytic Model
(Revised from Wallace & Shavelson, 1970, p. 151).

Levels of Decision-Making

In the formulation and implementation of the Instructional Team Project's design, three different levels of decision-making were identified. At each level the evaluator asked the question, "For whom and for what purposes are 'data' collected?"

At the first level, the Project Level, the function of evaluation is to determine the degree to which the ultimate objective of the project has been achieved. This objective involves the improvement of student cognitive, affective, and social behavior in the classroom. The focus, then, is on the student-centered objectives and how they are modified by the instructional team.

At the second level, the Institutional Level, the function of evaluation is to establish the degree to which the program's main objective, the effective training of instructional teams, has been achieved. The focus of evaluation at this level, then, is on the team's interpersonal and instructional behaviors as they are modified by the training program.

At the third level, the Extra-institutional Level, the function of evaluation is to provide information to the funding agency, USOE, (and the Stanford Graduate School of Education) on the specific effects of its expenditures on training teachers to work as instructional teams. The focus of evaluation at this level is on the project as a whole unit and how it compares with other projects.

Within this evaluation, the three levels of decision-making require different data to answer different questions. Since the focus of this report to AACTE is on the project's effectiveness in training teachers to work in instructional teams, evaluation at the Institutional Level of decision-making is the topic of the following discussion.

Evaluation of the Instructional Team Project at the Institutional Level of Decision Making

This sub-section describes the application of the systems analytic evaluation model to the Instructional Team Project at the Institutional Level of decision making.

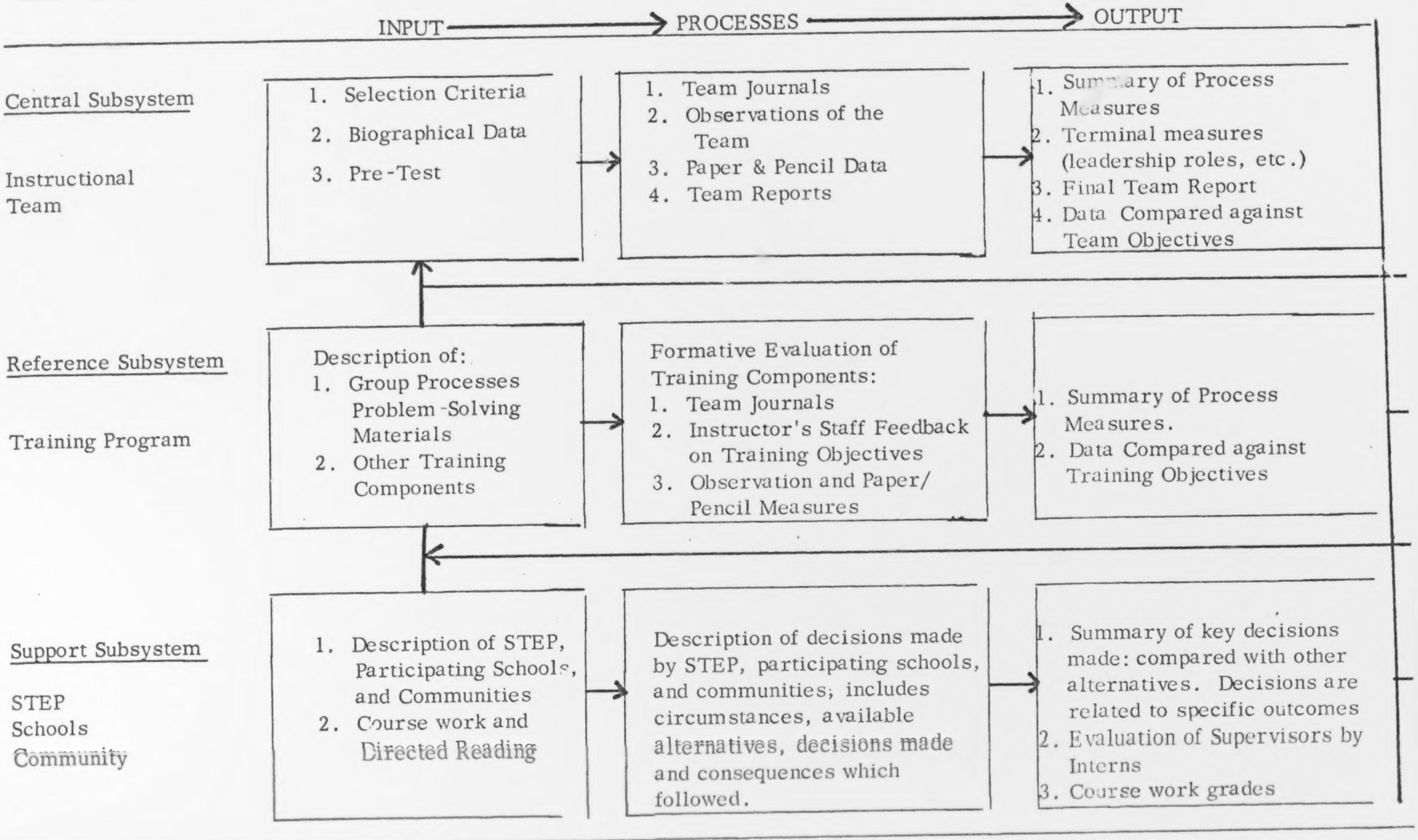
1. Overview

At this level, the Central subsystem is the instructional team (Figure 5). Evaluation questions focus on the extent to which the instructional team, as a whole, has become functionally interdependent, in planning, in teaching, and in evaluating their work.

The Reference subsystem includes the training program and its components -- the project staff (faculty members and research assistants), the Group Processes Problem Solving Protocol Materials, and course work taken by team members throughout the training program. At this level, evaluation questions focus on the effect of these specific components as they interact with the team. The immediate outcomes are the various Group Protocol "Packages" to use in training the teams. The ultimate objective for these components is developing a group of teachers into a functionally interdependent team.

The components of the Support subsystem are the participating schools, the communities they serve, and STEP. Evaluation questions focus on the ways these components directly interact with the training program, indirectly interact with the team, in order to achieve student-centered objectives (improving the cognitive, affective, and social behaviors in the classroom).

One dimension considered in the evaluation is represented by the hierarchy of subsystems shown in Figures 4 and 5. A second dimension includes the Inputs, Processes, and Outputs and their interrelations in each of the subsystems. The Input stage requires a detailed description of the components. In evaluating the project, detailed descriptions of team members are collected; pretesting of the team's members and students is carried out. The Processes stage focuses evaluation on the ways in which the components interact to achieve their objectives. For the instructional team, then, cohesiveness and problem-solving skills are assessed. The Output is the final "product." For the Central subsystem at the Institutional Level, the product is a team where roles are differentiated by function.



	INPUT	PROCESSES	OUTPUT
Central Subsystem Instructional Team	1. Selection Criteria 2. Biographical Data 3. Pre-Test	1. Team Journals 2. Observations of the Team 3. Paper & Pencil Data 4. Team Reports	1. Summary of Process Measures 2. Terminal measures (leadership roles, etc.) 3. Final Team Report 4. Data Compared against Team Objectives
Reference Subsystem Training Program	Description of: 1. Group Processes Problem-Solving Materials 2. Other Training Components	Formative Evaluation of Training Components: 1. Team Journals 2. Instructor's Staff Feedback on Training Objectives 3. Observation and Paper/Pencil Measures	1. Summary of Process Measures. 2. Data Compared against Training Objectives
Support Subsystem STEP Schools Community	1. Description of STEP, Participating Schools, and Communities 2. Course work and Directed Reading	Description of decisions made by STEP, participating schools, and communities; includes circumstances, available alternatives, decisions made and consequences which followed.	1. Summary of key decisions made: compared with other alternatives. Decisions are related to specific outcomes 2. Evaluation of Supervisors by Interns 3. Course work grades

Figure 5. Project Evaluation at the Institutional Level of Decision-Making (Feedback not shown).

2. Evaluation Described by Subsystem

Central Subsystem. The Input stage data for the Central subsystem are the selection criteria and biographical data, and pretest data for each member of the instructional team. Interns were selected in two stages: 1) acceptance to STEP, and 2) acceptance by schools and project staff into the project. STEP Associates and yeoman teachers were nominated by the school's principal, screened by the project staff, and then selected by mutual consent. Certain descriptive data are presented in the previous section.

Processes stage data were collected from journals, objective observations of team members working cooperatively, and paper and pencil instruments. Each team member was required to keep a journal of his experiences in the instructional team. He was to record critical incidents, such as key decisions which significantly affected the functioning of the team. Observation data and paper and pencil data were obtained as part of the Group Processes Problem Solving Protocol training. These data were obtained unobtrusively since the instruments comprised instructional components of the training materials (see Appendix C). For example, measures of leadership role within the team were obtained from observing a team solve a protocol problem and from a paper and pencil sociometric choice instrument. This information was used by the evaluators to map the team's progress toward becoming a functionally interdependent group. It was used by the training project to provide feedback to the team on how it operated to solve a problem.

Output stage data includes a summary of the numerous measures taken at the processes stage plus terminal measures. As an example of the summary function of evaluation at this stage, measures of leadership roles within the team are charted for the entire year. The result of this summary is a description of the role(s) the function(s) it served, and the aptitudes of individuals occupying those roles. Terminal measures would be administered at the end of the year in a posttest manner. Thus, new instruments measuring, say, "leadership" would be administered. Once the output data is complete, it gives comprehensive information on the extent to which the instructional team operated as a functionally interdependent unit.

Reference Subsystem. Data at the Input stage are primarily descriptive. A comprehensive description is given for each component of training. For example, the Group Processes Problem Solving Protocol Material constituted the major training component. The evaluation describes these materials in detail (see previous section and Appendix C). It examines the basis (e.g., theory) upon which the materials were developed and makes judgments regarding the appropriatness of objectives and contents.

Processes stage data are gathered from a number of different types of sources: journals of team members, evaluations of the component by the instructor and other staff members, observation instruments, and paper and pencil instruments. For example, one objective of the protocol materials is to train teams to use "problem-solving heuristics." One measure of the effect of the protocol materials is the frequency with which heuristics are used following training compared with the team's pretest baseline. This data is used for revising the protocol materials (although it also tells us something about the team). It should be emphasized that at this stage, focus is on the training components and the extent to which they have achieved their objectives. Also, this stage of the evaluation collects diverse data on each objective of the training material; data are collected at each training session.

Output stage data is a summary of the numerous measures taken at the processes stage. Each measure is related to an objective, and each objective to a portion of the content of a particular training component. The result of this stage is: 1) a summary of the capabilities and limitations of each training component, 2) a general conclusion about the effectiveness of the component as a whole, 3) and extensive recommendations for revision.

Support Subsystem. This subsystem is composed of three relatively diverse components: STEP, the schools in which the teams teach, and the communities surrounding each school. The major objective for this subsystem is to bring together these components. The evaluation of this subsystem, then, emphasizes the ways in which the three components interact to facilitate development of the instructional teams. The Input stage is primarily descriptive. The description focuses on the interrelation of the components. For example, the STEP Associates are faculty members in the schools and also associated with STEP. Or, the STEP supervisors assist the instructional teams in the schools. Or, the school faculty have certain attitudes on the ways in which the community can influence the teams; these attitudes may facilitate or hinder the success of the team.

The Processes stage data also are descriptive. The description focuses on key decisions made by each component of the support subsystem. The descriptive data include circumstances, alternatives available, decisions made, and consequences. For example, one team instructs 180 students. The team uses large group lecture and small group discussion. The school administration was faced with a logistical problem. The principal decided to give their "prize" lecture room to the team. However, since the team's small group classrooms are on the other side of campus, this decision has led to undesirable consequences. Another example highlights the interdependence of the components of this subsystem. The Giannini team is composed of interns majoring in music education. STEP, in conjunction with Giannini Junior High School, arranged to have the curriculum and instruction course taught at the school

The output data summarizes the key decisions, judges the decisions in light of other alternatives, and relates these decisions to specific outcomes. By this procedure, categories of decisions can be abstracted which, in the future, would serve as inputs and facilitate the programs accomplishment of its objectives.

Results of the Evaluation.

Since the experimental project was initiated this academic year, not enough data has been collected to permit definitive statements. Rather, what follows is a more impressionistic overview of the project, based on psychometric methods wherever data is available.

Instructional Teams. Each team has shown a marked improvement in its ability to identify, define and solve task problems. Measures of leadership indicate that the STEP Associates are regarded as task leaders; one or more of the interns assume maintenance (interpersonal relations) leadership. Measures of cohesiveness indicate that a team has evolved; there is strong group identification. Instructional team teaching is being carried out in the schools. Reports and observations indicate that each team is achieving some degree of success *vis à vis* its objectives.

The area of interpersonal relationships among members of each team remains the most pressing problem at present. Team teaching places a great amount of responsibility on each member. One teacher having to rely on other teachers, or having to accept others' ideas is a new and difficult experience. Data on cohesiveness, leadership, and emotionalities suggest that the teams will solve this problem. Evidence from journals and observation of team function indicate that each team has begun to develop a common, critical language for examining and communicating about the problems of instruction.

Instructional Components. Data collected from journals, observations, and pencil and paper instruments indicate that the protocol materials are achieving their objectives. The data also suggest revision in the materials which will improve sequencing of instruction, presentation of information and exercises, and the overall structure of the materials.

Data on specific training components such as instruction on evaluation and instructional psychology suggest need to emphasize these components. For example, team members agree that criterion-referenced testing answers many of their questions about accomplishment of objectives. But they have not put this "information" into practice.

Support Subsystems. To date, STEP and the individual schools have made every effort to support the Instructional Team Project. Personnel from both components have been made available for such diverse tasks as achievement testing, scheduling of classes (e.g., University classes held at participating schools), and discussions with team members. Each team has made contact with its community through dissemination of information in written and/or in verbal form. For example, the Giannini team gave a presentation to the community which described the project and demonstrated the types of music skills taught by the team. The students were the musicians for the concert.

By way of summary, the data collected indicated that the instructional teams and the training components are operating consistent with the program's objectives. Furthermore, the evaluation design has provided the focus necessary to evaluate each component of the project and may provide an "operational" model for evaluating similar programs.

V

Summary: Critical Features of Stanford's Instructional Team Project

The teacher's role in education is changing drastically. This change has been brought about by the development of instructional technology, such as computer-assisted-instruction, and by innovations, such as differentiated staffing and flexible scheduling. Yet, research on teaching and teacher education programs have been slow in responding to these changes. A comprehensive review of research from 1920 to 1969 on teaching methods found no consistent, significant differences in organizational variables such as small class versus large class, individual study without supervision versus supervised individual study (Dubin & Taveggia, 1969).

Commenting on this problem, Hilgard (1968, p.5) states that the need is not for more of the same research and development, but for something different -- a breakthrough in the study of instructional method. "There is no reason to expect new studies of the old kind to lead to anything more definitive from the old studies ... this is a serious matter, and somewhere along the line suggests failure ... to develop responsible applied psychology of learning and instruction." By highlighting the critical features of the Instructional Team Project, this summary serves to distinguish this project from other teacher education programs and from the "old kind" of studies on teaching.

The Instructional Team Project is an experimental project within Stanford's Secondary Teacher Education Program (STEP). Thus, it has its roots in eleven years of research on teacher education. The project also draws upon research and development from the Stanford Center for Research and Development in Teaching.

The project is designed to train teams of preservice and inservice teachers along with other professional staff and paraprofessionals to offer differentiated instruction at the classroom level. In general, the teams are composed of four preservice trainees (students enrolled in STEP), two STEP Associates (master teachers), and several yeoman teachers (exceptional teachers with two to four years of experience). The team members are participating in a special training program designed to give them group skills which will allow each team to adapt flexibly to each task and classroom setting. The program has five major objectives: 1) to link school districts and the communities they serve with institutions of higher learning; 2) to increase meaningful learning for students taught by instructional teams; 3) to create an effective system for continued training and retraining of school personnel; 4) to develop differentiated technical and personal skills and staffing patterns based on individually elaborated aptitudes for learning and teaching; 5) to modify, develop, and evaluate training curriculum designed to create an individualized approach to learning.

The theoretical base for the project is role theory and group processes. Role defines for the individual what he should do under certain circumstances. Until recently, little effort has been made to integrate role expectation for teachers with their individual personality and aptitude characteristics. The instructional team is viewed as a social unit where individual differences in personality and attitude may be combined to provide unique, individualized instruction. Different team members assume different roles (which depend on the interaction between task and aptitude). Thus, the instructional team can be characterized as a differentiated staff. But this staff is differentiated by function, not organization.

To provide the team members with skills to identify and assign roles under a given task, the principles of group processes are instructive. Research on perception, communication and decision making, problem solving, and group maintenance all contribute to developing a functionally interdependent team.

For further discussion of group processes theory, the reader is referred to the description of the Group Processes Problem Solving Protocol Materials where theory is translated into instruction.

The experimental base for the program is derived from a pilot program in STEP. The training approach was one of collaborative problem solving undertaken jointly by the trainees, their students, and members of the training staff. The trainees worked together in instructional teams. The role of the staff was to provide experiences which stressed interpersonal interactions common in schools and to provide trainees with firsthand experiences they could understand and draw upon for tentative policies in teaching. The trainees applied this training in their teams by preparing instruction, team teaching (e.g., microteaching) and evaluating their performance. Thus, the training program used a "learning team" approach. Training materials developed in this program served as a basis for developing the training components of this project. The evaluations of the pilot project concluded that a definite change in group building and maintenance of trainees had occurred.

The practical base for the project was provided by a consortium of school districts and Stanford University's Graduate School of Education. The purpose of the consortium was to build collaborative problem solving efforts among its members to establish needed training experiences for school personnel. The instructional team with the teaching roles differentiated by function proved to be a common solution for diverse needs.

The Stanford Secondary Education Program has developed an experimental project built upon theory, research and practice. The instructional team is seen as a vehicle for capitalizing on the individual personalities and aptitudes of teachers to provide specialized, individualized instruction in their areas of competence. The research being carried out emphasizes the functional uniqueness of the human teacher. By doing so, it is moving away from the "old kind" of research and into new areas of human teaching. This is action research in teacher education -- a collaborative quest for new answers to old and developing problems.

References

Bennis, W., Benne, K. & Chin, R. The planning of change. New York: Holt, 1969.

Bradford, L., Gibb, J. & Benne, K (Eds.) T-group theory and laboratory method. New York: Wiley, 1966.

Cronbach, L. J. How can instruction be adapted to individual differences? In R. M. Gagne (Ed.), Learning and individual differences. Columbus: Merril, 1967, pp. 23-39.

Cronbach, L. Mental Tests and the Creation of Opportunity. A paper delivered to the American Philosophical Society, April 1970.

Dubin, R., & Taveggia, E. The teaching-learning paradox: Comparative analysis of college teaching. University of Oregon: Center for Advanced Study of Educational Administration, 1969.

Hilgard, E. The psychological heuristics of learning. A paper presented to the National Academy or Sciences, California Institute of Technology, October 28, 1968.

Koff, R. H., & Clark, M. C. (Eds.), The Stanford teacher education program, Summer 1968: Theory, course description and evaluation. Stanford, California: School of Education, Stanford University, 1970 (mimeo).

Tannenbaum, B. and Hess, R. Fifth Annual Report of the Stanford Center for Research and Development in Teaching, Stanford, 1970. And Personal Communication.

Thelen, H. A. Classroom grouping for teachability. New York: Wiley, 1967.

Wallace, R. C. Jr., & Shavelson, R. J. Evaluation of curricular programs. In B. G. Andreas et al. (Eds.), Research into process curricula. Eastern Regional Institute for Education, 635 James Street, Syracuse, New York, 1970.

Appendix A

Specimen Instrument from the 1968 Experimental Project

STANFORD UNIVERSITY
STANFORD, CALIFORNIA 94305

OOL OF EDUCATION

We are currently in the process of finalizing our plans for this summer's Stanford Intern Program. The purpose of this letter is to let you know about the variety of training experiences you will have this summer.

Professors Merrill and McDonald and myself are each assuming responsibility for training a section of interns. You are one of 40 English and Social Studies interns selected to participate in my section of the summer training program. The group will be equally divided by subject matter area--20 English and 20 Social Studies interns.

The summer program will be composed of four training areas: "real" experience, training groups, problem laboratories, and curriculum and instruction. In the real experience component you will have the opportunity to examine and study the geography and the culture of the area in which you will be practice teaching. In addition, you will have the opportunity to observe, apprentice-teach and tutor economically disadvantaged students attending regular summer school sessions. These experiences should provide you with a taste of what schools and students are really like before you [illegible] to take the initial plunge in the fall.

The training groups are designed to provide a series of experiences which will help you to figure out how your teaching strengths can be most effectively brought to bear on classroom instructional problems. In addition, the training groups will help you to understand what factors operate in a smoothly functioning task oriented group.

The purpose of the problem laboratory will be to provide simulated and real classroom problems in a laboratory context. You will have the opportunity to teach a microclass of students and then watch yourself in action when the video tape is replayed. You will be helped to see what one might do differently if the lesson were "replayed"--you will be given the opportunity to reteach lessons and to observe changes in your own teaching behavior.

Our section will be staffed by a team of competent graduate students as well as by school administrators, counselors and teachers. We feel the team represents a mix that provides for the proper integration of theory and practice.

Enclosed you will find a "five-pound" questionnaire. We would like you to complete it and return it to us in the self-addressed stamped envelope by June 10th. The questionnaire is designed to provide us with information about your conception of and expectations about teaching. Your responses will help us to individualize, wherever possible, your program of teacher training. For example, as part of your summer program you will be working as a member of a learning team composed of four other interns. The purpose of the learning team will be to provide help in solving problems related to teaching. Your responses to the questionnaire will help our staff decide what interns might best work together in learning teams. Other examples are reflected in your preferences for an instructor, areas in which you feel you would like to receive training, etc.

We realize that the questionnaire looks pretty ominous, and we therefore suggest that you plan to sit down for three- or four-hour long sessions with it, a pen or pencil, liquid refreshment and perhaps some good music. Again, please complete and return the questionnaire to us by June 10th. Your thoughtful responses are a prerequisite to our plans to individualize your training program this summer.

I am looking forward to meeting you at the convocation on June 23rd, after which our section and staff will get together for a picnic. If you have any questions about the program or the questionnaire, please do not hesitate to write me.

Cordially yours,

Robert H. Koff

Robert H. Koff
Assistant Professor

RHK:ag
Encls.

STANFORD TEACHER EDUCATION
PROGRAM PRE-TRAINING
QUESTIONNAIRE

SUMMER, 1968

1. Read directions carefully where given
2. Numbers in parentheses are for key-punching purposes only and should be ignored
3. Use pen or pencil

Please return by June 10th to:

Robert H. Koff
STEP
School of Education
Stanford University
Stanford, California

Name: ______________________________ I. D. Number: ________________
(Last) (First) (Initial)

1. Sex
   ______ 1. Female (0)
   ______ 2. Male (1)

2. Martial Status
   ______ 1. Single (1)
   ______ 2. Married (2)
   ______ 3. Divorced (3)

3. In what area did you major as an undergraduate? ________________

4. In what area did you minor as an undergraduate? ________________

5. Age: __________

6. Number of children, if any ___________

7. If you had it to do over again, would you select your undergraduate major from the same area?
   ______ 1. Yes (1)
   ______ 2. No (2)

   If no, why? ____
   ____

8. If you had it to do over again, would you select your undergraduate minor from the same area?

______ 1. Yes (1)
______ 2. No (2)

If no, why? ____
____

9. Before deciding on teaching, did you ever seriously consider any other occupation or profession?

______ 1. Yes (1)
______ 2. No (2)

If yes, which occupation or professions did you consider? __________
____

10. Have you now any doubts that deciding to become a teacher was the right decision for you?

1. Yes; serious doubts (1)
2. Yes, slight doubts (2)
3, No, no doubts at all (3)

If yes, why? ____
____

11. How important has each of the following been in helping you to form a picture of what your teacher training may be like? (Check one column for each).

	Very Important	Fairly Important	Of Minor Importance	Not at all Important
1. School of Education bulletins	______ (1)	______ (2)	______ (3)	______ (4)
2. Teacher trainees at (your) school	______ (1)	______ (2)	______ (3)	______ (4)
3. Teacher trainees at other schools	______ (1)	______ (2)	______ (3)	______ (4)
4. Stanford faculty or staff	______ (1)	______ (2)	______ (3)	______ (4)
5. College faculty (other than Stanford)	______ (1)	______ (2)	______ (3)	______ (4)
6. Teachers who participated in a Stanford Intern Program	______ (1)	______ (2)	______ (3)	______ (4)
7. Other (What? ____________ ____________________	______ (1)	______ (2)	______ (3)	______ (4)

12. What things do you think you will like best about being a teacher? (Check as many as apply).

_____ 1. Being able to deal directly with people (1)
_____ 2. Being able to help children (1)
_____ 3. The fact that teaching is a highly respected profession (1)
_____ 4. Having interesting and intelligent people for colleagues (1)
_____ 5. Being my own boss (1)
_____ 6. Being sure of earning a steady income (1)
_____ 7. The challenging and stimulating nature of the work (1)
_____ 8. The vacation schedule (1)
_____ 9. Other (1) What? _____________________________

13. How would you characterize your participation in local [illegible] and/or national political affairs? (Check one)

_____ 1. Very active (1)
_____ 2. Active (2)
_____ 3. Moderately active (3)
_____ 4. Slightly active (4)
_____ 5. Not active at all (5)

14. Have you any friends who have been through this teacher training program at this school? (Check one) If no, skip question 15)

_____ 1. No (1)
_____ 2. Yes; one (2)
_____ 3. Yes; two (3)
_____ 4. Yes; three of four (4)
_____ 5. Yes, five or more (5)

15. What kinds of things have you discussed in some detail with them? (Check as many as apply)

1. Course work (Which courses? _______________) (1)
2. Research projects (1)
3. Individual faculty members (1)
4. The faculty as a whole (1)
5. The grading system (1)
6. Competition among students (1)
7. Cooperation among ;students (1)
8. Applicability of courses (1)
9. Other (What? ___________________________) (1)

16. In the process of making application to the Stanford Intern Program, did you gain any impression as to the personal characteristics the institution was seeking in the trainees to be selected? If so, describe briefly. ________

____

____

____

____

17. In which of the following public schools would you most prefer to teach? (Check one)

_____ 1. A school in a well-to-do suburban community (1)
_____ 2. A consolidated rural school in a prosperous farming territory (2)
_____ 3. A small rural school in a remote mountainous section (3)
_____ 4. A school in a tenement district of a large industrial city (4)
_____ 5. A school in an urban lower-middle-class neighborhood (5)

18. In which of the following public schools would you least like to teach? (Check one)

_____ 1. A school in a well-to-do suburban community (1)
_____ 2. A consolidated rural school in a prosperous farming territory (2)
_____ 3. A small rural school in a remote mountainous section (3)
_____ 4. A school in a tenement district of a large industrial city (4)
_____ 5. A school in an urban lower-middle-class neighborhood (5)

19. Which of the following groupings of students would you most prefer to teach? (Check one)

_____ 1. A class of exceptionally bright students (1)
_____ 2. A class of slow and retarded students (2)
_____ 3. A class of average students (3)
_____ 4. A class of students of widely varying ability (4)
_____ 5. A class of economically disadvantaged students (5)

20. Which of the following groupings of students would you least like to teach? (Check one)

_____ 1. A class of exceptionally bright students (1)
_____ 2. A class of slow and retarded students (2)
_____ 3. A class of average students (3)
_____ 4. A class of students of widely varying ability (4)
_____ 5. A class of economically disadvantaged students (5)

21. All things considered, what will you most likely be doing in ten years? (Check one)

1. Teaching at the elementary level (1)
2. Teaching at the secondary level (2)
3. Teaching at the college or university level (3)
4. Serving in an administrative position (school principal, supervisor, etc.) (4)
5. Serving as a non-teaching specialist (5)
6. Working in another position outside of education (6)
7. Married, but not teaching. (7)

22 - 23 The next two questions deal with relationships between teachers and the other adults commonly associated with schools: school officials, principals, other teachers, and parents of pupils. Place one check mark in each answer column for each question.

		Stanford Supervisor	Principal	Other teacher	Parents of pupils
How much influence do you think these persons will have over teachers in your school on professional or school matters?	1. Great influence	___ (1)	___ (2)	___ (3)	___ (4)
	2. Considerable influence	___ (1)	___ (2)	___ (3)	___ (4)
	3. Moderate influence	___ (1)	___ (2)	___ (3)	___ (4)
	4. Slight influence	___ (1)	___ (2)	___ (3)	___ (4)
	5. Little or no influence	___ (1)	___ (2)	___ (3)	___ (4)
How close do you think your relationship will be to these persons?	1. Close personal friendship	___ (1)	___ (2)	___ (3)	___ (4)
	2. Working relationship	___ (1)	___ (2)	___ (3)	___ (4)
	3. Acquainted only	___ (1)	___ (2)	___ (3)	___ (4)

24. Directions :

Which of the following do you feel you need to know more about before beginning your teaching? Select the 10 you feel are most important and rank them from 1 to 10. (1 = most important; 10 = least important).

_____ 1. Motivating students to work on class assignments.
_____ 2. What to do with students who finish early.
_____ 3. Setting up norms or expectations for student behaviors.
_____ 4. Involving students in group discussions.
_____ 5. Getting students to share ideas.
_____ 6. Discussing students' unsatisfactory achievement with parents.
_____ 7. Relating complex subject matter to students meaningfully.
_____ 8. Integrating the isolated, or disliked child.
_____ 9. Helping students with a destructive home situation.
_____ 10. Involving pupils in self-evaluation.
_____ 11. Discussing students' unsatisfactory social behavior with parents.
_____ 12. What happens when the teacher becomes impatient with students.
_____ 13. Communicating with the school's administrative staff.
_____ 14. Understanding why children fail.
_____ 15. Dealing with students who ask questions one can't answer.
_____ 16. Establishing rapport with students.
_____ 17. What to do when you lack enthusiasm for aspects of the subject matter you have to teach.
_____ 18. Planning a lesson.
_____ 19. Preparing valid classroom tests.
_____ 20. Contacting an unresponsive parent.
_____ 21. Determining grading policy.
_____ 22. Keeping several groups busy with planned activities simultaneously.
_____ 23. Becoming familiar with the policies of the school.
_____ 24. Helping children develop good work and study habits.
_____ 25. Keeping records and making reports.
_____ 26. Handling disciplinary problems.
_____ 27. Helping pupils with creative expression.
_____ 28. Developing remedial procedures.
_____ 29. Working effectively with other teachers.
_____ 30. Utilizing feedback from students.
_____ 31. Individualizing instruction.
_____ 32. Using small groups.
_____ 33. Selecting and/or determining curriculum objectives.
_____ 34. Locating appropriate curriculum materials.

25. Directions:

Below is a series of one-sentence statements related to educational concerns frequently faced by teachers. Check the appropriate column to indicate whether you strongly agree, agree, disagree, strongly disagree, or are undecided about your feelings regarding the statements.

For example: Teachers should assign homework to students each day

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
	X			

An X in the second column would indicate that you tend to agree, but not strongly, to the statement.
Check one column for each of the 48 statements shown below.

	Strongly Agree	Agree	Undecided	Disagree	Stron Disag
1. The school can do little about such difficult social problems as prejudice and discrimination; attempts to do something about them are often likely to aggravate the situation.					
2. The school is and should be a socially neutral institution; it should not take a stand on social issues.					
3. I intend to follow my Principal's preference as to teaching style.					
4. I should relegate all problems with parents to the Principal for solution.					
5. I feel free to depart from the District's adopted curriculum content when it seems appropriate to do so.					
6. The teacher should sometimes allow a class to do as it wishes even if it conflicts with previously made plans.					
7. Among colleagues, a teacher should feel free to criticize another teacher.					

	Strongly Agree	Agree	Undecided	Disagree	Stongly Disagree
8. Student conduct should be taken into consideration in deciding achievement grades.	______	______	______	______	______
9. Teachers should maintain a certain distance between themselves and students.	______	______	______	______	______
10. I am personally responsible for determining arrangement of course content in my classes.	______	______	______	______	______
11. It is essential for learning and effective work that teachers outline in detail what is to be done and how to go about it.	______	______	______	______	______
12. I should have some say in formulating or altering school rules.	______	______	______	______	______
13. It is best for my teaching career that I do not participate in local politics.	______	______	______	______	______
14. Teachers should ignore school regulations which interfere with the welfare of the students.	______	______	______	______	______
15. I do not expect to have my teaching assignment changed during the school year without my agreement.	______	______	______	______	______
16. I should deliberately make opportunities to become acquainted with the parents of my students.	______	______	______	______	______
17 Teachers need to keep somewhat apart from parents.	______	______	______	______	______
18. It is important to me to be well liked by my students.	______	______	______	______	______
19. I should emphasize a broad range of goals in my classroom.	______	______	______	______	______

		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
20.	I alone should decide how to give grades to students in my class.					
21.	I should be free to select the textbooks I want to use.					
22.	I should accept extra-curricular and non-teaching duties as part of my job.					
23.	As a teacher, I have to take community opinion into account in matters of personal behavior.					
24.	Parents usually will see the teachers side of a problem when something happens in school.					
25.	A teacher should occasionally leave a class to its own management.					
26.	It is part of my job to handle discipline problems arising outside my classes.					
27.	I should spend time outside school hours helping individual students.					
28.	There should be less emphasis in schools on the feelings of students and on their reactions to each other and to their teachers.					
29.	I should regularly attend PTA meetings.					
30.	With the many demands made upon them, especially for adequate teaching of basic subjects, we can hardly expect teachers to be too concerned with the personal and social adjustment of their students.					
31.	It is important that I consistently maintain orderliness and quiet in my classroom.					

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
32. Students should be encouraged to evaluate their teachers.	____	____	____	____	____
33. Most students take their responsibilities seriously.	____	____	____	____	____
34. Students are usually quite competent to select their own topics for themes and speeches	____	____	____	____	____
35. Students should be allowed to speak with each other without first getting the teacher's permission.	____	____	____	____	____
36. Most students try to do their work to the best of their ability.	____	____	____	____	____
37. Most students are considerate of the teacher's wishes.	____	____	____	____	____
38. Students should be allowed more freedom than they usually get in the execution of learning	____	____	____	____	____
39. It is possible to develop most curriculum around 'out of school' activities.	____	____	____	____	____
40. The backbone of the school curriculum is subject matter; activities are useful mainly to facilitate the learning of subject matter.	____	____	____	____	____
41. Learning is experimental; the student should be taught to test alternatives before accepting any of them.	____	____	____	____	____
42. Democracy can be successfully practiced in the average classroom.	____	____	____	____	____
43. Knowledge and subject matter themselves are not so important as learning to solve problems.	____	____	____	____	____

		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
44.	The grading system (A, B, etc) should probably be abolished.	____	____	____	____	____
45.	The healthy interaction of pupils with one another is probably just as important in school as the learning of subject matter.	____	____	____	____	____
46.	Specialization in subject matter is more important than training in the methodology of teaching.	____	____	____	____	____
47.	Students should be taught a problem-solving approach, and this approach should pervade all subject matter and teaching.	____	____	____	____	____
48.	The curriculum should be fit to the student and not the student to the curriculum.	____	____	____	____	____

26. Directions:

Below is a list of things that teachers frequently do in classrooms. Teachers have differing opinions as to which of these activities are meaningful. Check the appropriate column to indicate for each activity whether you think it is a waste of time. not so good, about average, quite good, or highly worthwhile.

		Waste of Time	Not so Good	About Average	Quite Good	Highly Worthwhile
1.	Have planning sessions in which the whole class is involved.	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)
2.	Work with a committee on a written report.	___	___	___	___	___
3.	Give a test or quiz .	___	___	___	___	___
4.	Have students take notes during lectures.	___	___	___	___	___
5.	Review a test and correct mistakes.	___	___	___	___	___
6.	Have a general class discussion led by another student.	___	___	___	___	___
7.	Go on a field trip.	___	___	___	___	___
8.	Work with a committee to prepare a lesson to present to the class.	___	___	___	___	___
9.	Have a committee prepare a lesson to present to the class.	___	___	___	___	___
10.	Assign exercises for practice .	___	___	___	___	___
11.	Have students work independently on a project they choose.	___	___	___	___	___
12.	Have students get individual help and instruction while doing class work.	___	___	___	___	___
13.	Have students recite their assigned homework.	___	___	___	___	___

		Waste of Time	Not so Good	About Average	Quite Good	Highly Worthwhile
14.	Have students participate in panel discussions.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)
15.	Have students evaluate their own performance in an acitivity	____	____	____	____	____
16.	Have students conduct research in the library for their term papers.	____	____	____	____	____
17.	Lead a discussion in which basic principles are explained.	____	____	____	____	____
18.	Have students take notes on a movie or film strip.	____	____	____	____	____
19.	Have a class discussion on a topic suggested by the teacher.	____	____	____	____	____
20.	Discuss with individual students activities they could do.	____	____	____	____	____
21.	Explain a homework problem to the class.	____	____	____	____	____
22.	Have class discussions of a movie or filmstrip.	____	____	____	____	____
23.	Have a conference with students concerning their progress in class.	____	____	____	____	____
24.	Perform a demonstration or experiment in class.	____	____	____	____	____
25.	Have a spelling bee or some type of quiz game.	____	____	____	____	____
26.	Have students prepare, on their own, a report for the entire class.	____	____	____	____	____

		Waste of Time	Not so Good	About Average	Quite Good	Highly Worthwhile
27.	Have students listen to teacher explain or demonstrate a lesson.	____	____	____	____	____
28.	Have students participate in a class drill on fundamentals.	____	____	____	____	____
29.	Lead a drill on fundamentals.	____	____	____	____	____
30.	Have students study course content as a member of a small group of students.	____	____	____	____	____
31.	Make clear what is expected of the students in class.	____	____	____	____	____
32.	Organize lessons so as to obtain maximum pupil activity.	____	____	____	____	____
33.	Get the class interested in a topic before presenting it as a topic of study.	____	____	____	____	____
34.	Have talk sessions so students will feel friendly toward the teacher.	____	____	____	____	____
35.						
35.	Post outstanding student papers on the bulletin board.	____	____	____	____	____
36.	Have a "bull session" with students to share feelings.	____	____	____	____	____

27. Directions:

What kind of an instructor would you prefer for the summer intern program? In the following items you will find two instructor characteristics paired. From each pair put a check in front of the one characteristic you most prefer. Do not omit any items. There are no right or wrong answers.

I would prefer an instructor who:

1.____ a. is an expert (1)
____ b. treats us as mature people (2)

2.____ a. makes the classroom pleasant (1)
____ b. thinks logically (2)

3. ____ a. understands our point of view (1)
____ b. is well known in his field (2)

4. ____ a. is dedicated to his students (1)
____ b. is dedicated to his subject (2)

5. ____ a. thinks logically (1)
____ b. is friendly (2)

6. ____ a. is well known in his field (1)
____ b. makes the classroom pleasant (2)

7. ____ a. is interested in us (1)
____ b. covers all the material (2)

8. ____ a. is dedicated to his students (1)
____ b. knows the theoretical background of his subject (2)

9. ____ a. thinks logically (1)
____ b. treats us as mature people (2)

10. ____ a. is friendly (1)
____ b. is well known in his field (2)

11. ____ a. covers all the material (1)
____ b. understands our point of view (2)

12. ____ a. is interested in us. (1)
____ b. is dedicated to his subject (2)

13. ____ a. is an expert (1)
____ b. is dedicated to his students (2)

I would prefer an instructor who:

14. ___ a. is well known in his field (1)
___ b. treats us as mature people (2)

15. ___ a covers all the material (1)
___ b. makes the classroom pleasant (2)

16. ___ a. understands our point of view (1)
___ b. is dedicated to his subject (2)

17. ___ a. is interested in us (1)
___ b. knows the theoretical background of his subject (2)

18. ___ a. is friendly (1)
___ b. covers all the material (2)

19. ___ a. makes the classroom pleasant (1)
___ b. is dedicated to his subject (2)

20. ___ a. knows the theoretical background of his subject (1)
___ b. understands our point of view (2)

21. ___ a. is interested in us (1)
___ b. is an expert (2)

22. ___ a. is dedicated to his students (1)
___ b. thinks logically (2)

23. ___ a. treats us as mature people (1)
___ b. covers all the material (2)

24. ___ a. is dedicated to his subject (1)
___ b. is friendly (2)

25. ___ a. makes the classroom pleasant (1)
___ b. knows the theoretical background of his subject (2)

26. ___ a. is an expert (1)
___ b. understands our point of view (2)

27. ___ a. is dedicated to his students (1)
___ b. is well known in his field (2)

28. ___ a. is dedicated to his subject (1)
___ b. treats us as mature people (2)

I would prefer an instructor who:

29. ____ a. is friendly (1)
____ b. knows the theoretical background of his subject (2)

30. ____ a. is an expert (1)
____ b. is dedicated to his students (2)

31. ____ a. thinks logically (1)
____ b. is interested in us (2)

32. ____ a. treats us as mature people (1)
____ b. knows the theoretical background of his subject (2)

33. ____ a. is an expert (1)
____ b. is friendly (2)

34. ____ a. thinks logically(1)
____ b. understands our point of view (2)

35. ____ a. is interested in us (1)
____ b. is well known in his field (2)

36. ____ a. is dedicated to his students (1)
____ b. covers all the material (2)

2[illegible]. Directions:

How do you describe yourself as a teacher? In the following items you will find two adjectives which describe teacher characteristics. From each pair put a check in frontof the one characteristic which best describes you as a teacher. Do not omit any items. There are no right or wrong answers.

1. ____ a. Open-minded
____ b. Receptive

2. ____ a. Spontaneous
____ b. Dependable

3. ____ a. Insightful
____ b. Enthusiastic

4. ____ a. Supportive
____ b. Reflective

5. ____ a. Open-minded
____ b. Efficient

6. ____ a. Uninhibited
____ b. Approachable

7. ____ a. Dependable
____ b. Considerate

8. ____ a. Dependable
____ b. Insightful

9. ____ a. Spontaneous
____ b. Supportive

10. ____ a. Approachable
____ b. Definite

11. ____ a. Enthusiastic
____ b. Inquisitive

12. ____ a. Considerate
____ b. Insightful

13. ____ a. Energetic
____ b. Efficient

14. ____ a. Open-minded
____ b. Approachable

15. ____ a. Inquisitive
____ b. Lively

16. ____ a. Reflective
____ b. Dependable

17. ____ a. Fair-minded
____ b. Enthusiastic

18. ____ a. Definite
____ b. Spontaneous

19. ____ a. Supportive
____ b. Efficient

20. ____ a. Lively
____ b. Fair-minded

21. ____ a. Organized
____ b. Supportive

22. ____ a. Planful
____ b. Open-minded

23. ____ a. Spontaneous
____ b. Inquisitive

24. ____ a. Analytical
____ b. Approachable

25. ____ a. Uninhibitied
____ b. Insightful

26. ____ a. Lively
____ b. Dependable

27. ____ a. Reflective
____ b. Approachable

28. ____ a. Inquisitive
____ b. Energetic

29. ______ a. Insightful
______ b. Definite

30. ______ a. Receptive
______ b. Dependable

31. ______ a. Spontaneous
______ b. Fair-minded

32. ______ a. Insightful
______ b. Organized

33. ______ a. Planful
______ b. Lively

34. ______ a. Supportive
______ b. Dependable

35. ______ a. Energetic
______ b. Considerate

36. ______ a. Fair-minded
______ b. Open-minded

37. ______ a. Uninhibited
______ b. Dependable

38. ______ a. Enthusiastic
______ b. Organized

39. ______ a. Insightful
______ b. Approachable

40. ______ a. Lively
______ b. Reflective

41. ______ a. Inquisitive
______ b. Definite

42. ______ a. Fair-minded
______ b. Energetic

43. ______ a. Planful
______ b. Supportive

44. ______ a. Fair-minded
______ b. Organized

45. ______ a. Receptive
______ b. Energetic

46. ______ a. Dependable
______ b. Open-minded

47. ______ a. Inquisitive
______ b. Uninhibited

48. ______ a. Considerate
______ b. Reflective

49. ______ a. Enthusiastic
______ b. Definite

50. ______ a. Considerate
______ b. Analytical

51. ______ a. Insightful
______ b. Energetic

52. ______ a. Organized
______ b. Inquisitive

53. ______ a. Spontaneous
______ b. Receptive

54. ______ a. Dependable
______ b. Fair-minded

55. ______ a. Definite
______ b. Lively

56. ______ a. Receptive
______ b. Uninhibited

57. ______ a. Approachable
______ b. Efficient

58. ______ a. Enthusiastic
______ b. Open-minded

59. ______ a. Dependable
______ b. Inquisitive

60. ______ a. Energetic
______ b. Organized

61. ______ a. Inquisitive
______ b. Fair-minded

62. ______ a. Spontaneous
______ b. Considerate

63. ____ a. Efficient
____ b. Insightful

64. ____ a. Open-minded
____ b. Lively

65. ____ a. Receptive
____ b. Inquisitive

66. ____ a. Energetic
____ b. Planful

67. ____ a. Fair-minded
____ b. Efficient

68. ____ a. Analytical
____ b. Uninhibited

69. ____ a. Organized
____ b. Open-minded

70. ____ a. Considerate
____ b. Lively

71. ____ a. Fair-minded
____ b. Reflective

72. ____ a. Efficient
____ b. Spontaneous

73. ____ a. Planful
____ b. Approachable

74. ____ a. Open-minded
____ b. Definite

75. ____ a. Approachable
____ b. Energetic

76. ____ a. Receptive
____ b. Planful

77. ____ a. Lively
____ b. Organized

78. ____ a. Considerate
____ b. Inquisitive

79. ____ a. Reflective
____ b. Enthusiastic

80. ____ a. Dependable
____ b. Analytical

81. ____ a. Uninhibited
____ b. Reflective

82. ____ a. Considerate
____ b. Efficient

83. ____ a. Spontaneous
____ b. Planful

84. ____ a. Supportive
____ b. Insightful

85. ____ a. Uninhibited
____ b. Considerate

86. ____ a. Approachable
____ b. Enthusiastic

87. ____ a. Organized
____ b. Considerate

88. ____ a. Planful
____ b. Uninhibited

89. ____ a. Insightful
____ b. Lively

90. ____ a. Analytical
____ b. Fair-minded

91. ____ a. Reflective
____ b. Definite

92. ____ a. Spontaneous
____ b. Approachable

93. ____ a. Definite
____ b. Fair-minded

94. ____ a. Definite
____ b. Uninhibited

95. ____ a. Analytical
____ b. Organized

96. ____ a. Spontaneous
____ b. Insightful

97. ____ a. Considerate
____ b. Open-minded

98. ____ a. Lively
____ b. Approachable

99. ____ a. Enthusiastic
____ b. Receptive

100. ____ a. Planful
____ b. Insightful

101. ____ a. Lively
____ b. Analytical

102. ____ a. Supportive
____ b. Inquisitive

103. ____ a. Dependable
____ b. Energetic

104. ____ a. Organized
____ b. Approachable

105. ____ a. Considerate
____ b. Definite

106. ____ a. Receptive
____ b. Lively

107. ____ a. Organized
____ b. Reflective

108. ____ a. Analytical
____ b. Spontaneous

109 ____ a. Supportive
____ b. Open-minded

110. ____ a. Uninhibited
____ b. Efficient

111. ____ a. Approachable
____ b. Dependable

112. ____ a. Enthusiastic
____ b. Considerate

113. ____ a. Planful
____ b. Inquisitive

114. ____ a. Open-minded
____ b. Energetic

115. ____ a. Analytical
____ b. Supportive

116. ____ a. Uninhibited
____ b. Organized

117. ____ a. Planful
____ b. Enthusiastic

118. ____ a. Approachable
____ b. Inquisitive

119. ____ a. Energetic
____ b. Reflective

120. ____ a. Efficient
____ b. Analytical

121. ____ a. Lively
____ b. Supportive

122. ____ a. Spontaneous
____ b. Organized

123 ____ a. Fair-minded
____ b. Insightful

124. ____ a. Energetic
____ b. Analytical

125. ____ a. **Inquisitive (1)**
____ b. **Efficient (2)**

126. ____ a. Supportive
____ b. Enthusiastic

127. ____ a. Receptive
____ b. Definite

128. ____ a. Fair-minded
____ b. Planful

129. ____ a. Uninhibited
____ b. Supportive

130. ____ a. Definite
____ b. Analytical

131. ____ a. Spontaneous
____ b. Open-minded

132. ____ a. Reflective
____ b. Receptive

133. ____ a. Efficient
____ b. Lively

134. ____ a. Fair-minded
____ b. Uninhibited

135. ____ a. Planful
____ b. Reflective

136. ____ a. Definite
____ b. Energetic

137. ____ a. Insightful
____ b. Receptive

138. ____ a. Analytical
____ b. Enthusiastic

139. ____ a. Efficient
____ b. Receptive

140. ____ a. Supportive
____ b. Definite

141. ____ a. Enthusiastic
____ b. Efficient

142. ____ a. Analytical
____ b. Planful

143. ____ a. Reflective
____ b. Spontaneous

144. ____ a. Receptive
____ b. Analytical

145. ____ a. Open-minded
____ b. Uninhibited

146. ____ a. Reflective
____ b. Efficient

147. ____ a. Energetic
____ b. Supportive

148. ____ a. Dependable
____ b. Enthusiastic

149. ____ a. Planful
____ b. Considerate

150. ____ a. Organized
____ b. Receptive

29. Directions:

In the group of items shown below, rank each role according to the frequency with which it characterizes your behavior in problem-solving groups:

1. Rank from 1 to 10: (1 = most often, 10 = least often)

____ a. initiator
____ b. contributor
____ c. information-giver
____ d. position-stater
____ e. elaborator
____ f. coordinator
____ g. orienter
____ h. evaluator
____ i. energizer
____ j. information-seeker

2. Rank from 1 to 8 (1 = most often, 8 = least often)

____ a. encourager
____ b. rewarder
____ c. harmonizer
____ d. mediator
____ e. follower
____ f. group observer
____ g. controller of flow of information
____ h. standard -setter

3. Rank from 1 to 9: (1 = most often, 9 = least often)

____ a. playboy (playgirl)
____ b. sympathy-seeker
____ c. aggressor
____ d. dominator
____ e. blocker
____ f. recognition seeker
____ g. self-defender
____ h. self-observer
____ i. vacillator

30. Directions:

How do you think your students will describe you as a teacher? For each item check the blank which indicates how you think your students will describe you.

1.	Makes the work too easy.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Makes the work too hard.
2.	Always thinks we'll do badly.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Always thinks we'll do well.
3.	Always knows what mixes us up.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Never knows what mixes us up.
4.	Acts old.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Acts young.
5.	Teaches us a lot.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Doesn't teach us much.
6.	Never helps us.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Helps us too much.
7.	Never looking for trouble.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Always looking for trouble.
8.	Knows if we are trying.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Doesn't know if we are trying.
9.	Lets us be noisy.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Makes us keep quiet.
10.	Makes school boring.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Makes school fun.
11.	Sticks up for us with the authorities.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Never sticks up for us with the authorities.
12.	Makes us want to learn.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Makes us not want to learn.
13.	Doesn't know what worries us.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Knows what worries us.
14.	Has hardly any rules.	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	Has too many rules.

30. (Cont'd)

15.	Knows which students like each other.	(1)	(2)	(3)	(4)	(5)	(6)	Doesn't know which students like each other.
16.	Often makes students look foolish.	(1)	(2)	(3)	(4)	(5)	(6)	Never makes students look foolish.
17.	Likes us.	(1)	(2)	(3)	(4)	(5)	(6)	Dislikes us.
18.	Doesn't inspire us	(1)	(2)	(3)	(4)	(5)	(6)	Inspires us.

31. Directions:

Write a paragraph (approximately 250 words) describing your concept of an ideal teacher.

32. Directions:

Draw or put together (on this page) a picture of your ideal teacher interacting with students.

33. Directions:

In a brief statement, indicate what you would do if confronted with the following classroom situations. Try to describe the actual operation. For instance, if you would talk to a pupil, indicate the type of thing you would say, etc. Your 'solution' may range from ignoring to a sustained effort, depending both upon how important the issue is and what opportunities are available to you to work problems through.

1. You have noticed that a particular pupil is obviously rejected by his classmates. How do you deal with this situation?

____

____

____

____

____

2. It is the time for grading and the question of promotion has come up for three pupils. Their achievement is far below all others in the class. How do you deal with this situation?

____

____

____

____

____

3. In your class you find several pupils who sometimes lead their classmates astray. How do you deal with this situation?

____

____

____

____

____

4. The pupils have suggested a topic for study which is unrelated to the present line of work. How do you deal with this situation?

____

____

____

____

____

5. You have a class which frequently "falls apart" if you don't exert strong leadership. How do you feel with this situation?

____

____

____

____

____

6. You have noticed that a few of your pupils are not interested in the lesson you are teaching. How do you deal with this situation?

____

____

____

____

____

7. A boy and girl start fighting and name-calling in the back of the room. How do you deal with this situation?

____

____

____

____

____

8. Your lesson is finished 5 minutes before the bell and the class wants to be dismissed early so that they can get to the cafeteria. How do you deal with this situation?

____

____

____

____

____

34. Directions:

Below please give us your feeling about how you hope the climate of the Stanford Intern Program will be this summer by placing a check in the appropriate space. For example:

happy __ x __ __ __ __ __ __ __ sad

This would show you hope the climate will be quite happy, but not "fully" happy. A check toward the right-hand side would show that you hope the climate will be more sad; a check in the middle would suggest that you hope the climate will be about equally happy and sad, or neutral.

Do this for each of the pairs of words or phrases below. Do not worry about whether you are precisely accurate, but give your best estimate of what you hope will be the "feel of the intern program" this summer. Work quickly.

1. alert ___(1) ___(2) ___(3) ___(4) ___(5) ___(6) ___(7) not alert

2. closed ___(1) ___(2) ___(3) ___(4) ___(5) ___(6) ___(7) open

3. mistrustful ___(1) ___(2) ___(3) ___(4) ___(5) ___(6) ___(7) trustful

4. exploring ___(1) ___(2) ___(3) ___(4) ___(5) ___(6) ___(7) taking things as they are

5. subjective ___(1) ___(2) ___(3) ___(4) ___(5) ___(6) ___(7) objective

6. cooperative ___(1) ___(2) ___(3) ___(4) ___(5) ___(6) ___(7) uncooperative

7. routine ___(1) ___(2) ___(3) ___(4) ___(5) ___(6) ___(7) experimental

8. supportive ___(1) ___(2) ___(3) ___(4) ___(5) ___(6) ___(7) not supportive

9. formal ___(1) ___(2) ___(3) ___(4) ___(5) ___(6) ___(7) informal

10. unprofessional ___(1) ___(2) ___(3) ___(4) ___(5) ___(6) ___(7) professional

11. personal and close	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	impersonal and distant
12. creative	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	not creative
13. insensitive	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	sensitive
14. genuine	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	phony
15. trusting	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	suspicious
16. traditional	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	inquiring
17. facing problems	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	avoiding problems
18. arbitrary	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	fair
19. conservative	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	innovative
20. unconcerned	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	concerned
21. full participation	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	restricted participation
22. facts win out	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	feelings dominate
23. listening	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	not listening
24. ordinary	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	way out
25. on the ball	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	not with it
26. honest	___ (1)	___ (2)	___ (3)	___ (4)	___ (5)	___ (6)	___ (7)	not honest

27.	fearful	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	____ (7)	not fearful
28.	tentative	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	____ (7)	sure
29.	blaming	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	____ (7)	not blaming
30.	decisions from above	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	____ (7)	shared decisions
31.	developing	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	____ (7)	not developing
32.	warm	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	____ (7)	cool
33.	rigid	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	____ (7)	flexible
34.	incompetent	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	____ (7)	competent
35.	feelings ignored	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	____ (7)	feelings count
36.	unusual	____ (1)	____ (2)	____ (3)	____ (4)	____ (5)	____ (6)	____ (7)	usual

35. What questions or reactions do you have regarding this questionnaire?

Appendix B

Assumptions Underlying the Secondary Teacher Education Program

APPENDIX B

STANFORD UNIVERSITY
SCHOOL OF EDUCATION
STANFORD TEACHER EDUCATION PROGRAM

ASSUMPTIONS THAT UNDERLIE THE TRAINING PROGRAM

I. The Classroom as a Social System

Forces operative in the classroom can be diagnosed and manipulated to facilitate learning. Such forces can be from within the group (e.g., racial differences) or from outside the group (e.g., concerned parents, teachers' union, etc.).

II. A Teacher Should Be Able to:

- State and implement his instructional objectives, both cognitive and affective.
- Diagnose the extent to which these objectives are already mastered by students.
- Have a variety of strategies and techniques for teaching any particular objective.
- Determine the preferred learning style of each of his students.
- Design instructional programs which are (potentially) of maximum effectiveness for each student, including individual, small and large group experiences, and various modes of presentation.
- Continually evaluate to determine whether instruction is effective.
- Alter instructional techniques according to what is suitable for subject matter, time, mood, etc.

IIII Structure Classroom to Objectives

Such parameters as scheduling, classroom arrangement, length of class time, size of group, homogeniety or heterogeniety of group (e.g., age, sex, grade), length of instructional period (e.g., semester), etc., should be modified on the basis of objectives and prior diagnosis of contingencies, needs of students, ecology, etc.

IV. Use of Inquiry -- To Achieve the Objective of Autonomy

A teacher is effective to the extent that his students are able to develop autonomy; that is, responsibility for their own learning. A particularly effective way for developing student autonomy, increasing interest and motivation, providing group problem-solving experiences, etc., is inquiry teaching.

V. Nondirective, Nonevaluative Teaching

Inquiry teaching is contingent on nonevaluative, nondirective teacher behavior. The teacher's role is that of facilitator and resource person.

VI. Group Dynamics

The ability to work in a group (of peer teachers or students) requires that one realize that the potential of each group member to contribute or lead depends on the nature of the task. Since task and composition can be altered, it is possible to manipulate the roles individuals take for more effective learning.

VII. Competence in Discipline

The more thoroughly teachers understand the conceptual framework of the discipline they teach, the more likely they are to be effective.

Appendix C

Outline: Group Processes Problem Solving Protocol Materials

The Work Group

Group Process Protocol Materials: Description and Table of Contents

I. Introduction to the Training Program: Problem Solving and Group Process in Education

1. in differentiated staffing
2. in the classroom
3. in teacher-student-parent-administrator-community interactions.

The Two-Part Structure: General and Specific

The training program is divided into two parts: the first general, theoretical and cognitive; the second specific, practical, and applied to actual situations. Participants go through the process of problem solving and group dynamics included in the program twice: first in order to become familiar with the concepts and techniques involved, and again to apply them to actual situations. The first part makes extensive use of set exercises; the second generates the content of the exercises from the participating teams. The first part provides a highly structured, non-threatening learning situation; the second reintroduces the complexities of actual tasks and personalities.

II. General Introduction to Problem Solving in Groups

A. Experience of being in a group - Game of Siamese Baseball

Description

This exercise contains all the components of problem solving and group process which participants will meet in the training program. The exercise is intended to provide an experiential context for what is to come.

Table of Contents

a. The "rules of the game."

b. Discussion guides.

c. Purpose: Meant as a general introduction to group processes. Concepts raised in discussion, as well as cognitive organizers ("mental compartments") throughout the rest of this package.

B. Two Problem-Solving Models

Description

Two models for problem solving are introduced immediately: one dealing with task; one with process. These provide continuous framework and point of reference throughout the program.

The first model contains five stages:

1. problem sensing
2. problem definition
3. decisions about how to proceed
4. generation of alternative solutions
5. evaluation of alternatives and decision.

The second model focuses on three phases in the changing dynamics of the group:

1. orientation
2. evaluation
3. control.

Table of Contents

a. Facsimile of the models
b. Guidelines for use of lecturette
c. Lecturette on problem-solving models.

III. Part 1: Concepts, Components, Processes and Techniques of Problem Solving

A. Presentation of the Problem-Solving Models

Protocol Unit 1

Exercise 1: The Pooling of Information

Description

1. "We've now given you the theory. Now we're going to give you an opportunity to apply it. Here's a problem; see what happens as you go about solving it."

Table of Contents

a. Purpose of the exercise: to introduce the major concept of this course in its two models; to point toward a goal (ultimate objective); to

Description

2. In this exercise each participant is given a set of five questions and yes or no answers to them. The object is to establish the identity of the thing to which the questions refer. The participant may not show his questions to the others but he may share them in any other way; only by pooling the information can the correct answer be found.

3. The focus of the observations during and the discussion after the exercise is upon the processes of problem solving used. The group may list the techniques it used. The intention of the discussion is to develop an awareness of the processes which occur.

4. Part of the purpose of this exercise is to obtain the before portion of a before-after measure: this exercise will be used again at the end of this section. Tapes, written records, and observations by the trainers (and any available observers) will comprise the measures for comparison with the later exercise. Participants will also be asked to write a comprehensive description and analysis of their experience.

Table of Contents

provide preliminary data as to the group's problem solving skills. Round II will be administered at the end of this Package. It might also be interesting to collect comparative data at the end of all packages. For this purpose, a third exercise under "Supplementary (Optional) Exercises."

b. Guidelines for procedure.

c. Materials needed, where obtainable or facsimiles of materials.

d. Discussion guide.

B. The distinction between task and process

1. The components of Group Process: Percpetion and Communication. Protocol Unit 2

A series of three exercises and videotape of a lesson taught to junior high school students on modes of communication, verbal and other kinds of communication, feedback patterns and difficulty in communicating.

Exercise 2: Feedback

Description

1. The purpose of this exercise is to identify the difficulties involved in communication and to point out the necessity of free exchange and complete feedback.

2. In the exercise a communicator describes three rectangles on a sheet and the other group members draw it from his description under four different conditions of feedback:
   a. none
   b. the instructor may question the group (yes or no replies)
   c. the group may question the instructor
   d. free feedback.

Table of Contents

a Purpose: to demonstrate the effects of communication on a group under conditions of open (free) vs. incomplete feedback.
b. Introduction
c. Glossary of terms
d. Instructions
e. Facsimile of materials
f. Procedures for collecting, analyzing data

Exercise 3. Video tape of feedback and communication problems in the classroom.

Description

1. Discussion about feedback and communication
2. Conceptualizations and research findings
3. Guidenlines for using feedback

Table of Contents

a. Purpose: To show a sensitive teacher leading her class to explore modes of communication and the effects of different kinds of feedback.

b. Discussion guide

c. Handout: Facsimile of "Guide for Using Feedback."

Exercise 4. Echolalia

Description

1. The purpose of this exercise is to develop further awareness of communication difficulties and to develop listening skills.
2. In this exercise the participants divide into groups of three: two speak and one acts as an observer (they alternate roles). The person spoken to may not reply until he has restated what the speaker said.
3. The discussion focuses upon the problems in listening.

Table of Contents

a. Purpose: To demonstrate several sources of "listening biases."
To provide practice in listening attention.

b. Procedure

c. Action

d. Discussion guide.

Exercise 5. Perception Biases

Description

1. In this exercise, participants are presented with pictures of ambiguous situations. Participants are asked only to describe, not to interpret, each scene.
2. The purpose of this exercise is to develop an awareness of perceptual biases.

Table of Contents

a. Purpose: To illustrate the skills involved in accurately observing an event.

b. Materials

c. Procedure

d. Instructions for collecting data.

e. Discussion guide.

2. The Components of Task Accomplishment: The Interaction of Task and Process, and Observation Skills

Protocol Unit 3.

The preceding section (Protocol Unit 2) focused upon the individual and one-to-one communication, and upon the processes and problems of communication. This section begins to look at groups at work performing tasks.

The series of three exercises illustrates the concepts of task/process interaction, roles and influence. The various exercises are tied in to the stages of the problem-solving model.

During this section two separate areas will be dealt with simultaneously. Participants will be learning the skills of observing and identifying what transpires as groups perform tasks at the same time that they learn additional concepts and skills. During the next three exercises groups of participants act as observers on a rotating basis. Thus, each exercise also includes observation techniques.

Exercise 6. The Possible/Impossible Tasks

Description

1. In this exercise the participants are asked to perform an easy task and an impossible task, given eight minutes for each.
2. The purpose of the exercise is to demonstrate the influence of the nature of the task upon the group processes.

Observation Skills

In order to identify the patterns of group interaction, each participant gains experience using three observation instruments:

1. a who talks to whom tabulation
2. a verbal observation scale
3. a non-verbal behavior observation sheet.

In the ensuing discussion the data gathered serves as a basis for exploring the ways in which the group functioned.

Table of Contents

a. Purpose: To illustrate the effect of task complexity on group process. To give practice in the use of several observation instruments.
b. Materials needed.
c. Introduction to exercise
d. Instructions for procedure
e. Facsimiles of observation instruments
f. Facsimiles of tasks.
g. Guidelines for presenting and discussing data.

Exercise 7. The NASA Exercise

Description

1. In this NASA training exercise, participants form teams in which they are asked to arrive at a consensus ranking of the usefulness of a list of items for survival on the moon.
2. The focus of this exercise is upon the roles assumed within the group, upon the patterns of influence within the group, and the process of decision-making.

Observation Skills

Each participant is asked to rank the members of his team according to their contributions to performing the task. The data gathered serves as a basis for the subsequent discussion.

Table of Contents

a. Purpose: To compare the indivi
perception of roles within the gr
with the roles which emerge thr
participation in the exercise.
To provide an experience in gro
decision making.

b. Materials needed

c. Introduction to exercise

d. Procedure

e. Facsimiles of:
   1) Perceived Patterns of Influenc
   (Sociometric Questionnair
   2) Decision Form, with problem
   statement and instruction
   3) Instructions for achieving
   consensus
   4) Group Summary Sheet

f. Discussion Guide.

3. Problem Solving and Heuristics

Protocol Unit 4.

a. Review of the model
b. Discussion of the NASA exercise (and perhaps the Miles exercise) in terms of the model:
   1) NASA looks only at stages 4 & 5 of the model
   2) Miles looks at stages 2-5
   3) Problem sensing is possible only with "real" problems.

Exercise 8. Block Exercise

Description

1. In this exercise each group receives 22 blocks which they must correctly divide into four groups.

Table of Contents

a. Purpose: An Opportunity to te
problem solving model.
Practice in using the model as a
framework.

b. Materials needed

2. In this exercise observers are assigned to identify the occurrence of the stages in the problem-solving model.
3. The focus here is upon the generation and evaluation (validation) of alternative problem solutions.
4. Subsequent discussion includes listing the heuristics employed in solving this problem.

c. Procedures
d. Discussion Guides

Lecturette: Heuristic devices in problem solving

  a. Purpose: To make explicit some useful techniques and strategies for solving problems.
  b. Handout: Heuristics for Problem Solving

Exercise 9. Role-Playing

Description

1. This exercise serves to introduce the technique of role-playing, including:
    a. the function of the director
    b. the duties of the actors
    c. the responsibilities of the audience (The observation skill in this exercise)
2. In this exercise each participant is given a role to play in a task simulated situation. The simulation situation will present a typical problem to be solved, such as a discipline problem or whether to teach sex education in the school. Participants will be assigned task oriented roles (teacher, student, parent, principal, school board member) and emotionalities (authoritarian, political liberal, radical or conservative, compromiser, facilitator, etc.).

Table of Contents

a. Lecturette: role-playing as a heuristic device.
b. Directions for conducitng a role-playing session.
c. Facsimiles of problems, role descriptions.
d. Procedures
e. Discussion

The group will experience attempts to solve the problem while the participants play their roles.

4. Summary and Review.

Protocol Unit 5

Description

a. Review of concepts and skills
b. Repeat Exercise 1
c. Discussion, analysis, and comparison with the first experience
d. Review of problem solving

Table of Contents

a. Review (in discussion) of the concepts and principles featured to this point.
b. Pooling of Information Exercise (Round II).
    1) Purpose of the Exercise:
        - to provide comparative data on the group's problem solving skills
    2) Guidelines for procedure
    3) Materials needed, where obtainable or facsimiles of materials
    4) Discussion guide.

Preview of Part II of the Course

IV. Part 2: Applications

In this section the skills and concepts learned in Part I will be applied to the actual, functioning teams of which the participants are members. This section also is divided into two parts: problem solving, and emotionality and group maintenance.

Protocol Unit 6

A. Problem Solving

1. Review of the model
2. Application of the entire model.

Exercise 10: Group-Generated Problems

Description

1. Problem sensings: the participants list the problems which they are aware are facing them.
2. The participants rank these problems according to their priority, and select one to deal with at this meeting.
3. The team redefines the problem in solvable terms.
4. The group solves the problem, using the problem-solving model.

In dealing with actual problems it is necessary to remain flexible, in scheduling and in the introduction of heuristic devices. Perhaps a whole meeting will be requires simply to list, rank, select and define a problem. Role-playing can then begin the next meeting. Perhaps the problem will move to solution without any opportunity to introduce role playing. It is also possible that role playing can be integrated into the initial problem.

Table of Contents

a. The Problem Solving Mode
   1) Review of stages
   2) Transition into next exercise
b. Exercise: Group-Generat Problems
   1) Purpose: to give the gr an opportunity to engage under observation, in a problem-solving sessio tackling a problem whic of real and pressing co to the group.
      - to simulate through role playing those situations which the group will encounter in implement their decisions, which t anticipate will be probl actic.
      - to allow the opportunity team members to gain experience, through simulation, in dealing wi situations in which roles are unfamiliar to them.

The process is intended to include at some point:

1) review of heuristics
2) use of role-playing as one possible heuristic.

- to open up for investigation the area of emotionality as a process variable which influences the group's performance of its tasks.

2) Sequence of Activities:
   - Stage 1 - sensing the proble
   - Stage 2 - defining the task
   - Stage 3 - considering alternative courses of action for proceeding towar solution.
   - Proceeding to solution - use of role playing where appropriate.
3) Instructions for Procedures
4) Facsimiles of Group-Generate Problems
5) Instructions for Selecting a problem.

B. Emotionality and Group Maintenance Protocol Unit 7

Description

1. Definition of emotionality
   a. Relation of personal needs to group functioning.
   b. Emotionality and work
   c. Four types of emotionality:
      1) Fight
      2) Flight
      3) Pairing
      4) Dependency

Table of Contents

a. Overview and Introduction
b. Lecturette: Personality Issues-- The Emotionality Model.

Exercise 12: Reaction to Group Situations Test (Rest)

Description

1. This test presents a series of group situations in a validated test which enables the individual to assess himself in respect to the four emotionalities.
2. The focus of this test is upon the individual and his own behavior.
3. The individual's self-ratings provides information which he can check against his own and/or other group members' perceptions of him. They provide a potential point of departure for an assessment of each individual's role in and contribution to the group .

Table of Contents

a. Purpose: to generate data on those behaviors which reflect motives for the individual's membership in a group.
b. Materials needed
c. Procedures
d. Facsimile of RGST
e. Instructions for self-scoring
f. Discussion Guide

Exercise 13: How It Feels Here

Description

An instrument to assess individual perceptions about the group.

1. This instrument provides individual and group assessments of the health of this group.
2. Data provides a point of departure for assessment of the group.
3. Discussion of cohesiveness.

Table of Contents

a. Purpose: To generate data on the individual's perception of group climate.
   - To provide data for a pooled measure of group cohesiveness.
b. Materials needed
c. Procedures
d. Facsimile of "How It Feels Here" instrument.
e. Instructions for self-scoring.
f. Scoring Key and Discussion Guide.

g. Lecturette: Group-Oriented Behavior and Cohesiveness.
h. Measure of Group Cohesiveness
    1) Instructions for obtaining a combined profile of group climate.
    2) Facsimile of Group Profile Form.
    3) Discussion Guide for Group Profile
i. Handout: Group Maintenance Behavior.

Exercise 14: Intervention Strategies

Description

1. This exercise consists of a simulation situation in which the team must deal with a problem. Three members are assigned emotionalities or maintenance roles and play them during the task session. Trainers and/or group members may assign emotionalities or maintenance roles which closely fit the actual group members. The exercise is played through one or more additional rounds, in which observers may become participants and roles may be switched.

2. The purpose of this exercise is to define group building and group weakening behaviors, and to demonstrate ways in which all behaviors can contribute to group maintenance.

The exercise in group maintenance and emotionality in particular, and all those which deal with the actual team will probably uncover the interpersonal problems which are interfering with group

Table of Contents

a. Purpose: To provide experienc in redirecting, through facilitating (Maintenance) behaviors, the emotionalities of group members.
   To demonstrate how role playing can be used to keep the group in good working order.
b. Materials needed.
c. Procedure
d. Facsimiles of Roles
e. Facsimile of Problem
f. Discussion Guide.

problem solving. The presence of the trainers and skilled observers offers the teams an opportunity to deal with these problems while help is available, and thereby to develop means of solving such problems which they can carry with them into their school settings.

Appendix D

Specimen Instructional Material
from
Project Training Subsystem

STANFORD UNIVERSITY
SCHOOL OF EDUCATION
SECONDARY TEACHER EDUCATION PROGRAM

Special Educational Psychology

Course Syllabus

Robert H. Koff
Richard J. Shavelson

Summer, 1970
6/25/70

I. Introduction

The purpose of this syllabus is to describe the EPDA project in general and, more specifically, to describe the special Educational Psychology course. The following is an outline of the contents of the syllabus:

- I. Introduction
    - A. History of STEP
    - B. Description of EPDA Project
    - C. Instructional Team Training
    - D. Course Overview
- II. Resource Books
- III. Assignments
    - A. Journal
    - B. Instructional Team Report
    - C. Microteach Program Plan
- IV. Grades
- V. Assignment Time-line
- VI. Office Hours
- VII. Participants in the Program

A. History of STEP

Since 1964, the Secondary Teacher Education Program (STEP) has been training teachers in a curriculum which is essentially one-third study in the academic field to be taught, one-third professional education, and the remainder an internship in a local participating secondary high school. The present program was initiated under a 1959 grant from the Ford Foundation to establish a new program in teacher training; in 1964 the School of Education incorporated the experimental program into its regular curriculum. Since then, the program has been continually improved as new methods of training, including the extensive use of video-taping devices, have been tested and adopted where successful.

The more than 100 students enrolled in the program, which leads to a Master of Arts degree in Education, work in eight curriculum areas: art, music, science, social studies, English, mathematics, foreign language, and physical education. The one-year program is an integral part of the school of Education and serves as a training-research laboratory for the Stanford Center for Research and Development in Teaching.

Under the guidance of the newly formed Committee on Teacher Education and in association with the Stanford Center for Research and Development in Teaching, STEP has continued to pioneer procedures for training teachers. Students are trained with the use of video-taping procedure called Micro-Teaching. Micro-Teaching is essentially a scaled down teaching situation in which trainees teach a small group of students and at the same time are videotaped. Replay of video tapes and supervisory critique are integral parts of the training program.

B. EPDA Project Description

The Education Professions Development Act project is a program within the STEP program funded by USOE. This special program is concerned with providing equality of opportunity for all students. It focuses on preparing preservice and inservice teachers to work in teams differentiated by teaching role. The project objectives include:

-- Strengthening linkages between school districts and the communities they serve on the one hand, the Stanford's Teacher Education Program and SCRDT on the other.

-- Creating an effective system for continued training and retraining of school personnel.

-- Developing, operating, and evaluating a practical method for training teachers in teams based on individual aptitudes.

-- Increasing achievement and meaningful learning of students taught by instructional teams (To what extent are teams better than other instructional methods? Under what conditions?).

-- Recommending the simplest and most efficient procedures through which a school may differentiate its staff into instructional teams differentiated by teaching role.

-- Exploring the implications of the principles demonstrated in this project for improvement of classroom teaching for all students.

-- Examining the impact on students of team-developed curriculum.

Instructional teams in this special program will be composed of several STEP interns, one of two STEP Associates,[1] a specialist in curriculum development and evaluation, and, in some cases, one or two paraprofessionals. In addition to receiving regular training with the STEP interns, the EPDA interns, along with the other team members, will participate in a Group Processes/Educational Psychology program designed to train these individuals to work in instructional teams. Also, during the summer, EPDA interns will be introduced into the school and community where the team will be teaching through activities to be worked out in cooperation with STEP Associates and schools.

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[1] A STEP Associate is a member of STEP who has been chosen for his outstanding work in his school and community and is responsible for on-site training of interns.

Members of a Consortium (representing nine area school districts and Stanford University) were asked to submit miniproposals for use of teams to meet particular needs. After evaluation by the Consortium, the three proposals selected for funding are:

San Jose High School - A team of interns (specializing in English, social studies, math, science) and STEP Associates will work to alleviate specified acute problems. The school is characterized by a disproportion of ethnic minorities (including 61% Mexican-American), low income, low achievement, and a curriculum considered largely irrelevant to meet particular student needs.

Irvington High School, Fremont - Instructional teams involving master teachers in Science and English, two yoeman teachers (with four or five years experience), four interns, and a paraprofessional will have 360 ninth grade students for a two-hour block of interdisciplinary instruction.

Giannini Junior High School, San Francisco - A team of interns and a STEP Associate will teach general and vocal music in a racially mixed school and explore the possibilities of differentiated staffing and improved inservice training for the Music Department of the San Francisco Unified School District.

C. Training for Instructional Teams: Overview

In addition and in conjunction with courses and teaching experiences provided by the STEP program, the EPDA instructional teams will be involved in training components designed to train them to work in instructional teams. These components are: 1) a series of courses (or seminars) concentrating on group processes, instructional team teaching, and educational evaluation; 2) instructional team microteaching; 3) a community study; and 4) curriculum planning for instructional team teaching throughout the year. The following is a breakdown of these training components by quarters:

Summer

- Course in Educational Psychology
  - Group processes
  - Educational evaluation
  - Instructional team microteaching;
- Introduction to the school and community in which the team will teach;
- Curriculum planning.

Fall

- Seminar on team teaching;
- Community study;
- Curriculum planning, execution, and evaluation.

Winter-Spring

- Seminar on team teaching and educational evaluation;
- Curriculum planning, execution, and evaluation.

D. Course Overview

This Summer our course will meet eight times. The following is a tentative schedule of events:

Meeting	Event
1	Administrative details, summary of EPDA project, relation between EPDA and STEP, introduction to the inquiry model.
2	Group processes: Russian or Siamese baseball, discussion of experiences as individuals forming a group.
3	Group Processes: Collection of testimony. Educational evaluation.
4	Protocol material: Goals and roles; task; listening and observing.
5	Protocol material: Feedback and communication.
6	Protocol material: Problem solving heuristics; hypothesis testing.
7	Protocol material: "Hidden agenda" - hypothesis testing.
8	Course summary and evaluation.

II. Resource Books

There are no required texts for the Educational Psychology course. However, you may find that you would like to pursue some of the topics dealt with in class in greater depth. This bibliography is included for that purpose.

The following list of books is selective rather than exhaustive. It covers a range of topics including group dynamics, applications of the results of small groups research to the classroom, and team teaching. Most of the books are available in Cubberley library. Some are also available in paperback at the bookstore.

Amidon, E. J. and Flanders, N. A. The Role of the Teacher in the Classroom. Minneapolis: Paul S. Amidon and Associates, 1963.

Bair, M., and Woodward, R. G., Team Teaching in Action, Hougton Mifflin; Boston, 1964.

Bales, R. F. Interaction Process Analysis: A Method for the Study of Small Groups. Cambridge: Addison-Wesley, 1950.

Bany and Johnson, Classroom Group Behavior; Group Dynamics in Education. Macmillan, New York, 1964.

Benne, K. D. and Sheats, P. Functional roles of group members. Journal of Social Issues, 1948, 4, 41-49.

Bion, W. R. Experiences in Groups. New York: Basic Books, 1961.

Borgatta, E. F., and Crowther, B. Social Interaction Processes. Chicago: Rand McNally and Co., 1965.

Bradford, L., Gibb, J., and Benne, K. T-Group Theory and Laboratory Method. New York: John Wiley and Sons, Inc., 1964.

Brady, E. H. Seminar Selections on the Disadvantaged. New York: Selected Academic Readings, Inc.

Brockover, W. B. A social psychological conception of classroom learning. School and Society, 1959, 8, 84-87.

Cartwright, D. & Zander, A. (Eds.) Group Dynamics. Evanston, Ill.: Row Peterson, 1966 (Revised edition).

Chamberlin, Leslie J., Team Teaching: Organization and Administration. Charles E. Merrill Publishing Co., Columbus, Ohio, 1969.

Clark, Leonard (Ed.). Strategies and Tactics in Secondary School Teaching. New York: MacMillan, 1968.

Davis, Harold S. Planning for Team teaching. Education, 1965, 85, 333-336.

Fox, R. S., Lippitt, R. O., and Schmuck, R. A. Pupil-teacher Adjustment and Mutual Adaptation in Creating Classroom Learning Environments. Cooperative Research Project No. 1167. Institute for Social Research, University of Michigan, 1964.

Fox, R., Luszki, M. B. and Schmuck, R. A. Diagnosing Classroom Learning Environments. Teacher Resource Booklets on Classroom Social Relations and Learning. Science Research Associates, Inc., Chicago, 1966.

Getzels, J. W. and Thelen, H. A. The classroom group as a unique social system. In H. Nelson (Ed.), The Dynamics of Instructional Groups: Sociopsychological Aspects of Teaching and Learning. 59th Yearbook of NSSE, Part II. Chicago: NSSE, University of Chicago Press, 1960.

Goffman, E. Interaction Ritual. New York: Doubleday & Company, 1967.

Gump, P. V. and Sutton-Smith, B. Activity-setting and social interaction: a study. American Journal of Orthopsychiatry, 1955, 25, 755-760.

Hanslovsky, Moyer, and Watner, Why Team Teaching? Columbus, Ohio: Merrill Publishing Company, 1969.

Hare, A. P. Handbook of Small Group Research. New York: The Press Press .

Hare, Paul; Borgatta, E. F., and Bales, R. F. (Eds.) Small Groups: Studies in Social Interaction. New York: Alfred A Knopf, 1955.

Heinicke, C. and Bales, R. F. Developmental trends in the structure of small groups. Sociometry, 1953, 16, 7-38.

Jackson, P. Life in Classrooms. New York: Holt, Rinehart and Winston, 1968.

Kounin, J. S., Gump, P. V. and Ryan, J. J. Explorations in classroom management. Journal of Teacher Education, 1961, 12, 235-246.

Lewis, W. W. and Newell, J. M. Analysis of classroom interaction through communication behaviors. Madison: University of Wisconsin. (Mimeo).

Lewis, W. W., Newell, J. M. and Withall, J. An analysis of classroom patterns of communication. Psychological Reports, 1961, 9, 211-219.

Lippitt, R., Polansky, N., Redl, F. and Rosen, S. The dynamics of power: A field study of social influence in groups of children. In Maccoby, E., Newcomb, T., and Hartley, E. (Eds.) Readings in Social Psychology, New York: Henry Holt and Company, 1958.

Lippitt, R. and White, R. An experimental study of leadership and group life. (see above).

Mager, R. F. Preparing Instructional Objectives. Palo Alto: Fearon Publishers, 1962.

Mann, R. Interpersonal Styles and Group Development. New York: John Wiley & Sons, 1967.

Miles, M. Learning to Work in Groups. New York: Teachers College Press, 1950.

Mills, T. M. Power relations in three-person groups. American Sociological Review, 1953, 18, 351-357.

Peterson, Carl H. "Team teaching in the high school," *Education*, 1965, 85, 342-347.

Polansky, N. Lippitt, R. and Redl, F. An investigation of behavioral contagion in groups. *Human Relations*, 1950, 3, 319-348.

Polos, Nicholas, C., *The Dynamics of Team Teaching*. Dubuque, Iowa: Wm C. Brown and Company, 1965.

Redl, F. Group emotion and leadership. *Psychiatry*, 1942 (November)

Schmuck, R., Chesler, M. and Lippitt, R. *Problem Solving to Improve Classroom Learning*. Teacher Resource Booklet on Classroom Social Relations and Learning. Science Research Associates, Inc., Chicago, 1966.

Shaplin, Judson T., and Henry F. Olds, Jr. (Eds.). *Team Teaching*. New York: Harper and Row, 1964.

Slater, P. E. Role differentiation in small groups. *American Sociological Review*, 1955, 20, 300-310.

Thelen, H. A. *The Dynamics of Groups at Work*. Chicago: University of Chicago Press, 1954.

Thibaut, J. and Kelley. *The Social Psychology of Groups*. New York: John Wiley & Sons, 1959.

Trump, Lloyd J. What is team teaching. *Education*, 1965, 85, 327-332.

Widgerson, Harry I. Team teaching in American education. *Education*, 1965, 85, 323-326.

III. Assignments

Our intention is to limit the amount of outside work required by this course. The purpose of the following assignments is to provide you with an opportunity to apply concepts and to reflect upon your experiences in the course.

A. Journals[1]

In order to provide a systematic, longitudinal assessment of your learning experiences and of the development of the instructional teams, we want you to maintain a journal of your experiences in this course. Entries should be made for every regularly scheduled class activity as well as for team meetings outside of class. The entries should consider critical incidents which occur during each event. By critical incident, we mean events that lead to decisions by individuals or groups, that lead to planning by individuals or groups, that lead to the initiation of certain procedures, that lead to evaluation of planning and execution of procedures, etc. In addition, each entry should answer these four questions regarding the activity:

1. *What positive reactions did you have?*
2. What negative reactions did you have?
3. How was the activity helpful to you in improving your teaching in a team?
4. What would you have done differently if you had been responsible for the activity?

The journals will be collected every two weeks beginning July 10 and will be used to evaluate the course. The journals also will provide information regarding your individual progress and the progress of the instructional team throughout the course.

B. Instructional Team Report

Each learning team is expected to prepare a paper for which members of the team will be held responsible. The purpose of this paper is to communicate to yourselves, other teams, and interested individuals the way in which individuals evolved into an instructional team and the way the team functioned in an instructional situation. The paper should be of sufficient length to describe critical incidents encountered by the team, roles evolved within the team and their relation to the functioning of the team, and the team's planning, presentation and evaluation of its microteaching experience. The following questions are set forth as a guide and are not necessarily comprehensive:

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[1] Two points need to be stressed. First, the journals function as a formative evaluation instrument; the journals will serve, in part, to remodel the course training component when required. Second, the journal may be made as public or private as the individual desires. Mr. Koff or Mr. Shavelson will read the journals and make extensive comments. However, the individual can also specify the journal reader he wishes.

- What problems were encountered in the formation of the instructional team? How were they identified?

  Were there individual differences, changes in sociometric structure and roles in the instructional teams?
- What were the major roles which evolved in the instructional team? How were the role and the individual matched? Why?
- What were the problems, issues, successes, and failures encountered by your learning team? How did problems develop? How were they resolved?
- How did the team function to plan, present and evaluate each microteaching lesson? Was there a difference between the first and last lesson? Why?
- What forces influenced the effectiveness of the team's teaching the microteaching students? How were these forces strengthened, weakened or realigned?

C. Microteach Program Plan

Each instructional team will meet during the second week of classes (June 29-July 2) to outline its plan for team microteaching. This program plan will be submitted by Thursday, July 2. This program plan should include two team microteaches. The first, your initial attempt; the second, a revision from the results of your first microteach. The program plan should include brief descriptions of:

- The curriculum, objectives, and instructional procedures;
- Rationale for choice of team members to teach the microteach;
- Evaluation of the microteach;
- Steps taken for revision.

IV. Grading

The Special Educational Psychology course is offered on a Pass/Fail, (+/-) basis.

V. Assignment Time-line

Assignment	Date
Summer Program Plan	July 2
Journals	July 10, 24; August 14.
Instructional Team Report[2]	August 14

VI. Office Hours

Mr. Koff's office hours are Monday and Wednesday, 10:00 - 12:00 Noon.

Mr. Shavelson can be seen at the R&D Center (Stanford Center for Research and Development in Teaching), 770 Welch Road, Room D, Tuesday and Thursday, 1:00 - 3:00 P.M.

All members of the staff will be available during most of the day. Individual appointments can always be arranged.

VII. Participants in the Program

1. Project Director - Robert H. Koff
2. Project Coordinator - Richard Shavelson
3. Instructional Faculty - Members of the School of Education and C&I Faculties will participate in the interrelated tasks of 1) instruction; 2) collaboration with other participants for development of curriculum and training experiences.
4. Curriculum Development and Evaluation Specialists (Supervisors) Individuals filling these roles are doctoral students in the School of Education. The Supervisor's role is to assist the instructional team in developing curriculum; to observe the team in action; and to help team members develop teaching skills and evaluate their progress.
5. Instructional Team Coordinator
   The role of this individual is to coordinate and communicate projects and tasks involving faculty associates, their school districts, and communities. The Coordinator for the project is Thomas Lorch.

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[2] Examples are on reserve in the Cubberley Library. They are listed under Ed. 341.

6. School/Community Coordinator

The role of this individual is to coordinate the EPDA project with the community's interests, and to establish an information base for both community and school personnel.

The School/Community Coordinator is Mrs. Ethel Lichtman.

7. STEP Associates

Each team will have assigned to it two Associates. STEP Associate #1 serves as the leader of an instructional team primarily concerned with curriculum development and assessment of team progress.

STEP Associate #2 is primarily responsible for organizing inservice programs involving both the school staff and the community the project, and maintaining open lines of communication among the district administrators, the school staff, the instructional team and the community.

8. School District Personnel

Principal, other school administrators, staff, and Advisory Boards.

9. Community Participants

Participants will serve as representatives on the Advisory Boards.

10. Interns

11. Paraprofessionals

The paraprofessional's role will take on definition after he has worked at some length with the instructional team. In general, it is expected that he will engage in limited teaching, complete various clerical tasks, assist in communicating with members of the community, assist the team in observing students and in diagnosing social and learning problems.

12. Research Team

Members of this group are engaged in developing a part of the training program for the instructional teams. They will act as participant/observers in the training sessions, and draw on team comments and criticism of the training materials and activities to further develop and refine the curriculum. These research assistants are doctoral students in the School of Education at Stanford.

Research Team: Richard Beyer, Deborah Davis, Annalee Elman, George Sousa, and Robert Trinchero.

THE STANFORD TEACHER EDUCATION PROGRAM SUMMER, 1969

Dr. Koff's Section

The enclosed paper is a brief summary of inquiry processes and ideas related to interpersonal dynamics in the classroom. In addition, there is a list of terms that have been used in association with inquiry processes that are defined.

The ideas and terms discussed in these pages are primarily those of Herbert A. Thelen, Professor of Educational Psychology, the University of Chicago. Students interested in acquiring more information about inquiry processes as described by Thelen should read: Education and the Human Quest and Dynamics of Groups at Work (these two books are listed in your resource bibliography).

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I. Inquiry Processes

This component of the training program is founded on the principle that teacher education is a continuing process rather than an event that occurs in a specific period of time. Education is viewed as inquiry, where students learn to set up a series of agreements for themselves about how they are to inquire, think, act, etc. Metatheory refers to systems or conceptions. It does not equal a point of view; it refers to a mode of inquiry in and of itself. According to McKeon there are four types of inquiry -- logistical, dialectical, problematic, and operational. One of the purposes of the summer program is to provide experiences which will assist trainees in becoming familiar with these "commonplaces" of inquiry.

Logistical inquiry refers to the organization of a body of ideas. Organization begins with a taxonomy, follows a plan of investigation, and at all times attempts to make explicit analytical classifications; statements of relationships between elements and wholes. The use of the periodic table in the physical sciences is a good example of logistical inquiry.

Dialectical inquiry originates in a feeling or a set of propositions about the world. Using this form, feelings or propositions are made explicit and tested against data in the real world.

Problematic inquiry begins with tension within the inquirer. The prupose of this form of inquiry is to locate the source(s) of tension in order to change its condition and thereby move to another form of inquiry. This process starts openly with a generalized feeling of tension and proceeds to a committment to act. This form is reflected in the work of men like Kurt Lewin and Norbert Wiener.

Operational inquiry is primarily group oriented and involves careful operationalization and definition of terms. Purposes, goal objects, and phenomena that are studied must be observable. For example, the view that intelligence is what intelligence tests measure is an example of operational inquiry. If a group can agree to a specified "criteria" of the operational mode, (i.e.: the example stated above) then the inquiry can proceed. Men like Anatole Rappaport and David Wechsler are identified with this form of inquiry.

The type of inquiry that an individual employs is at first a method of taste and is probably not consciously chosen or "arrived at." These forms become conscious and "operational" after one does work, produces a product. Only after productivity does a realization arise that there is a possibility that one can contribute toward analysis of one's own style of inquiry. Throughout the summer program trainees will be encouraged to work and to examine their own style of inquiry. It is assumed that through an understanding of their own approach to inquiry, teachers will be more aware of the limitations of that mode. In addition, they will perceive that there are a variety of ways that inquiry contributes to the solution of problems. In this manner they can assist the learner to develop his own style of inquiry without doing violence to their own styles or the structure of the discipline they are teaching.

Sequence of Activities and Functional Transitions

The beginning of an educative sequence is a situation in which individuals can make discoveries freely. The basic requirement of the situation is that it invite speculation; the child is not directed how to respond but is directed to respond in any way that he can. Useful confronting situations requires selection from a rich supply of stimuli or else a good deal of projection to fill in a pattern when the stimuli are spare.

The purpose of confrontation is to arouse a learner's interest in the topic at hand. It is to provide a counter-intuition, or a cognitive dissonance that will forceably turn the learner's head in order to make him deal with the topic at hand. Confrontation necessarily creates a tension within the individual.

One of the major objectives of education is to teach the learner to deal effectively with tension through understanding. In addition, the reduction of tension has to involve consciousness. A learner's ability to deal with tension effectively will result in an adaptive reorganization of his behavior.

Thus the purpose of confrontation is to present the student with materials or experiences in such a way that he is emotionally and/or intellectually aroused; the student's interest is aroused in the face of discrepancy, redundancy, or ambiguity in the perceptual field.

The structure of a confrontation is derived from subject matter, but it draws upon a cluster of non-deliberate spontaneous natural tendencies. These spontaneous tendencies are: (a) to speak of what we know; (b) to react to the behavior of others; (c) to point out a moral; (d) to supply the answer that temporarily eludes the other fellow; and (e) to seek out a friend, or someone who can be trusted, to talk about tension-producing experiences that cannot be handled in an habitual manner, etc. In short, confrontation is an experience which capitalizes on spontaneous natural tendencies that invite the learner to speculate.

Affective or cognitive disequilibrium, the result of a successful confrontation, may be effected, among other ways, by:

a. A paucity of stimuli, a scarcity of information, a dearth of clues, by means of which a person confronted can "know." A person so confronted can in the absence of knowing, fill a cognitive void with "explanations" constructed of guesses, hunches, speculations, hypotheses -- the stuff of imagination;

b. A plethora of stimuli, an abundance of information, a glut of clues, from which the person confronted must select for attention, response, reaction. The dynamic operative in this category lies in the affective realm; e.g., the dynamic of identification when viewing a film or witnessing a role-played incident. Whatever the dynamic, it is assumed that one may be assured that the student's interest in those items of experience he selects out from the many for attention will be sufficient for initiating inquiry. That is, the student will exercise a natural tendency to select from among stimuli on the basis of their immediate meaningfulness to him;

c. A violation of expectations, sets, hypotheses, preconceptions about the way the world operates, such violations induce emotional reaction -- a feeling of disequilibrium in the face of the unexpected, uncertainty in the face of the unknown -- requiring of the confronted person some type of cognitive rearrangement to account for the perceived discrepancy, in an effort to reduce the disequilibrium.

Confrontations result in a need to know, to reduce tension, anxiety in the face of discrepancy, redundancy or ambiguity by "finding out" and explaining, by answering questions not yet asked. In short, to capitalize on natural tendencies, to produce meaningful learning and retention.

Confrontation and initial discovery are followed by emergence of awareness. A person who has been stimulated to new feelings, apprehensions and thoughts usually tends to seek out a friend and talk it over with him. Several pruposes are served by these dialogues: the individuals legitimize their thoughts by finding out that the words for them do not sound absurd; they rehearse their opinions and thus process their official version of the confrcnting event; and they are stimulated by each other to create and be aware of additional hypotheses. Children tend to engage in these processes among themselves, between themselves and imaginary playmates, and between themselves and their imitation of parents. Scholars "talk it over" with other scholars internalized within their heads.

Emergence of awareness allows students to become aware of the problematic state that has been induced, and to "try out" the products of excursions into their fantasy life, for the purpose of finding the boundaries, the scope of the problem which he, privately, has tentatively defined.

Emergence of awareness is facilitated when the student is with those he can trust, hence free of the fear of punishment or reprisal, witting or unwitting, by teacher or fellow students. This suggests that students be allowed to form highly integrative and interactive small groups (preferably of friends) free of the teacher's presence, so that the student can freely speculate and share his ideas with those who feel as he does.

Thus the purpose of the use of small groups or other techniques at this stage of the inquiry is to cause students to have course -relevant ideas that are uniquely their own. The function of the teacher at this stage is to now reassemble the students that enter into a group dialogue. The students must be given an opportunity to fix firmly, in reality, their perceptions and rationalizations; to check them against the perceptions and experiences of others, and ultimately against established knowledge.

This process is begun by inviting a wide range of testimony. What have been the "problems" of individuals in the group must now be made the substance of the whole class's concern in order that each student may learn from the others and that all may learn is some kind of concert.

The collection of testimony begins to build "common problems" for investigation. This process rests on a foundation of an uncensored, uncorrected, uncriticized collection of responses recorded in the small group discussions. This making "public" of perhaps foolish or far-out reactions results in no discomfort to the initiators because of the "distance" between the initiator and response; small-group recorders typically report to the whole class without connecting responses to their initiators. This process provides the important function of depersonalizing ideas. This process refers to allowing ideas which are uniquely those of an individual to be used by a group.

The sort of testimony and examination of it is dependent upon the nature of the subject discipline. The possibilities include: seeking for differences and similarities of perception; identifying the categories and sensitivities (political, economic, social, etc.), implied by comments; diagnosing issues around which comments revolve (justice, conservation, optimism, rationality, truth, etc.) In order to conduct such a discussion, the teacher must himself understand and know the sorts of categories and issues that are the instruments of understanding in his subject field, and he must be able to recognize the student's testimony as naive, blundering and primitive impressions of these key concepts.

The outcome toward which the discussion is guided is a sense of problem, expressed in the formulation of large questions which further experiences illuminate. A "large question" can be investigated in many different specific instances, as each instance poses its own problem. The range of problems or problematic situations is so great that it seems reasonable to have each student work on one which is especially meaningful to him. The appropriate problem would present the large question in a context that is familiar to the student and important to his needs and present understandings.

Students faced with a carefully arranged list of thoughts, feelings, and reactions that are organized by the teacher according to the logical forms inherent in the subject matter will now be pushed by the demands of the ideas -- to make sense, to derive clarity and consistency from the material. In short, students will find themselves in perhaps four types of quandry:

1. What are the issues that divide the group? What separates one student from the others?

2. What are the assumptions underlying another person's guesses, hunches, speculations, hypotheses, conclusions, even assertions? What confirmation, reassurances, can one derive from others?

3. What are the correspondences between the familiar and the problematic? What are the similarities and differences among perceptions that members of the group had during the confrontation?

4. What procedures can be implemented to answer these questions?

Provisional resolution of these quandries constitutes what may be called a class agenda. That is, questions submitted by class members at this stage of the inquiry will indicate the direction to be taken by subsequent investigation. Thus the outcome toward which collection of testimony is directed is a sense of problem, expressed in the formulation of a large question which further experience and dialogue is to illuminate.

Thus far in the sequence of activities there has been no interaction with established knowledge, only personal opinion, subjective feeling. All that has occurred so far has dealt with the relation of the self to the immediate environment, not with the reality outside private experiencing and interpersonal relationships. What has occurred, then, is not educative; it is cathartic. The question may now be asked how one moves from subjective experiences so far dealt with toward the discovery of objective facts.

Once each student has selected or formulated his problem, individual work begins again. This work is called problem-solving, but discovery is its central component. This discovery differs from the initial discovery in the confronting situation in that the problem situation is far more completely difined. It is bound by agreements and expectations developed during the preceeding discussion. The student's task is to find a pathway from the givens, the defined questions and the observed facts, to the "conclusion", a set of more warranted ideas about the large question as exemplified in his problem situation. Materials used for problem solving must allow for many alternative pathways, so that thought is continually challenged by the need to make decisions.

Once the students have completed and discovered a pathway (and a solution), they now have the task of organizing their awareness into communicable testimony for the class. Report-writing and review by ad hoc study committees are possible activities for this purpose.

With testimony organized and in mind, the students are now ready for the second kind of dialogue. The first dialogue attended to the various ways in which persons can and do relate themselves to open situations. The second dialogue attends to the various relationships that can be found among parts of problematic situations. The teacher beings by eliciting testimony about the discoveries made during the experience of grappling with the problems. As before, the teacher invites and guides the examination of this testimony, using methods appropriate to the field of knowledge. Generally speaking, two kinds of ideas are to be examined: ideas about the "substance" of the question itself, and ideas about pathways through problems. For example, one student will have worked through trial and error; another primarily through syllogisms; another, by stating the conclusion first and working backwards; another by analysing the elements and seeing how they combine. In short, students will use the four fundamental methods of inquiry: logistic, dialectical, problematic, and operational. The examination of testimony centers, at this time, around identifying different sorts of paths and then considering the conditions under which each would be most appropriate.

Thus students, acting individually, or in concert with those whose areas of concerns or modes of investigation overlap his own, begin investigations with the "givens" -- emotions experienced thus far, notions and ideas, hunches and hypotheses, etc. Solving his problem, either one he began with, or one he has assumed as his own from those comprising the agenda, the student now faces two procedural alternatives, having to do with relating subjective experiences to objective facts:

a. finding a way -establishing a path from the problem as "given" to a solution; reaching a conclusion by as many means as there are problem-solvers: "inductive", "deductive", appeal to authority, etc.

b. demonstration of conclusions reached; "proof" and warrantability of solution.

As can be seen, the dialogue is conducted to cast the student's discoveries in the problem-solving experience up against the established discipline in methods of working. During this discussion, the teacher is also trying to assess what sort of confronting situation will be most appropriate to initiate a new cycle of inquiry.

Most students move from the personal, the particular, to the public, the general; students give form to subjective experience so that it may be conveyed in conventional traffics to the realm of public knowledge. Such form may be reflected in a book report, a picture, panel discussions, etc.

In addition, the reports of students must stand the ultimate test of reality. That is, the student must testify as to the state of the issues at his present stage of inquiry -- now that his findings and established knowledge have been added to the dialogue. And these steps constitute a reformulation of the problem in the mind of the student, a recharging of the inquiry cycle.

The entire sequence of activities in functional transitions involved in this model of inquiry are shown in Figure 1. In the figure it can be seen that individuals conduct inquiries when they are alone, in groups, and in the larger community. In addition, there are specified moments during an inquiry when the wealth of experience that the learner brings with him to the classroom is utilized (personal knowledge), and there are other times when it is imperative that the individual conduct a dialogue between personal knowledge and established knowledge -- knowledge that is warrantable and stands the test of time.

	ALONE	GROUPS	CLASS
Personal Knowledge	CONFRONTATION: Paucity of stimuli Plethora of stimuli Violation of expectations	EMERGENCE OF AWARENESS Small Groups: free of teacher composed of friends, i.e. no threat to self-esteem	COLLECTION OF TESTIMONY Uncensored: list of: reactions guesses hunches hypotheses Group Agenda: issues? assumptions? correspondences? procedures?
Established Knowledge	RESEARCH: Conducting of investigations "reality-testing" problem-solving As many paths as pathfinders from "givens" to problem solution. Comparison of internal, subjective knowledge to external, objective fact	REPORT: Organization of findings: designs of strategy Method of investigation Formalization of comparison begun to left	REFORMATION: Testimony from problem-solvers state of issues now report of methods Formulation of results of formal comparison begun to left. Recharging of cycle. Reformulation of problem.

Fig. 1 Sequence of activities and functional transitions

In presenting this sequence of learning activities, the role of meditation has been omitted. When all is said and done, it is meditation that produces the educated man as distinguished from the merely knowledgeable or technically proficient. It is hoped that the model that has been described, with its continual alternation of discovery and dialogue, is sufficiently meaningful so that meditation is a never-ending process.

The model should not be taken as a series of specific steps, each of which is to be implemented by a designated procedure -- even though as an aid to visualization the model has been presented didactically as though it is a set of procedures. The activities that the model describes are to be thought of as occurring in one way or another in any instructional process. The explicitness of each "step", deemphasis thereon, and the form of the instrumental activity will differ significantly from one class, unit, teacher, or discipline to the next.

The commonplaces of the inquiry procedure are reflected in the following assumptions:

1. When a person is engaged in meaningful, purposive (psychologically rewarding) activity, his mode of behavior is primarily reorganization.

2. Reorganization of behavior is a natural mode; under certain conditions and with respect to certain sorts of stimuli, all individuals spontaneously engage in this mode -- natural inquiry.

3. Because the school acts as the transmitter of useful and usable knowledge, it should facilitate reorganization of behavior, or inquiry as the basic process of learning.

4. In order to do this, teachers must have a clear idea of what the processes are, and how they become arranged in meaningful continuities or strategies, and of what factors under the control of the teacher (e.g. social organization, materials) facilitate these processes.

5. The inquiry procedures presented here have as their central features the alternation of discovery of personal subjective knowledge with dialogue in which personal subjective knowledge is compared with established knowledge. It is proposed that any viable and adequate method of teaching must make use of these elements.

Thus not only will teachers be concerned with the dynamics involved in this formulation of inquiry, but they will also be concerned with the question of: under what conditions do specific educational interventions (teacher behaviors, the use of materials, etc.) seem to be most effective in accomplishing stated objectives? and the question of what issues or problems are uncovered by students as they try to assimilate experience with new techniques into their own body of understandings? Thus students will hopefully be able to determine what conditions (broadly defined) come closest to achieving desired outcomes. And finally, students will be able to assess what permanent value they have learned about teaching, students, and organization of instruction from their own experience and inquiry.

II. The Classroom Learning Environment

It has often been pointed out that primitive societies have no real need for formal education. Learning what one needs to know as an adult is a continuous process; adult models are available to the child and he practices the roles he will later have to play in society. In more advanced cultures, there is too much to be learned, and inadequate opportunity to learn it formally, for this process to suffice. Increasingly greater time and energy are needed in situations explicitly labeled as learning ones. These are artificial situations for the child -- he is asked to learn from life in relative isolation from the realities of life. We can thus no longer rely casually on the tremendous learning ability possessed by all young children; it is necessary to consider what is most natural for the child and to use those processes that can facilitate learning in a reasoned and explicit way.

Even though teaching may be an art, there are many reasons why children learn or fail to do so in school. One important set of these concerns the motivational state under which the child is functioning. Drawing upon our earlier propositions concerning learning effectiveness, let us explore more fully the relationships between teaching, learning, and the facilitating environment.

The child who wants to learn and is free to do so will learn more than one who is not involved. Beyond this, we may discriminate several levels of motivation that may be operative in any instructional sequence.

Most primitive is the visceral level. When survival is threatened, all else is generally put aside. Individuals in our society do not often have serious worries of this sort; but if a child is hungry or expects to be battered on the playground at lunch, he will be able to give less of his energy to learning than otherwise. We might also include in this category the effects of restrictions often placed on children in schools. For some active children, sitting still and being quiet for long periods of time may be just as disruptive, in terms of the child's normal modes of behavior, as threats and deprivations we would consider more serious.

A second level of motivation is the social-ego level -- for example, needs for acceptance, for a feeling of competence, for avoiding failure. If these are the child's predominant concerns, he will attend more to whether or not he is likely to be ridiculed if he provides an answer, more to what it is the teacher wants him to say, than to the learning itself. Possible external rewards and punishments are thus given disproportionately greater importance. It is important here to make the distinction between coping with a problem and defending against it: the child who is defending is not simply failing to learn; rather, he is learning the wrong thing -- how to avoid real involvement.

If neither of the above is dominant, the child can operate in terms of cognitive motivation; here, unlike states of social-ego, he is concerned primarily with the task, not with his relation to the task. Several cognitive motives may be differentiated. One of these is the desire for closure, for answers and conclusions which make what is new fit with what is already known. Uncertainty can be disturbing, especially when one must take some action on the basis of knowledge. The desire for closure is the desire to eliminate uncertainty, to be able to be comfortable.

A second cognitive motive may be called excitement motivation -- learning or inquiring for the excitement of the activity itself. Excitement motivation is, in all probability, inherent in the information processing. Organisms, like organizations, cannot simply sit still; exercising capabilities is rewarding in and of itself.

Finally, there is curiosity motivation, directed toward furthering one's understanding of the environment, toward making it more meaningful. This is aimed not simply at finding answers to problems, but also at creating new problems to be followed up.

It is hoped, of course, that a child's learning takes place under the influence of cognitive motives, and that search for knowledge is an open-ended process oriented toward finding problems. To manage this, the child needs to be free from distraction of his intra-personal concerns which, if aroused, will take precedence -- to use his social-ego needs in support of cognitive activities wherever possible. Thus, if a child's sense of competence can be built while he is allowed to exercise his curiosity, two important sense of motives work synchronously to further learning.

INTERPERSONAL DYNAMICS

What are some of the needs of children that may be relevant in the classroom-characteristics of their development and of their interaction with others which can work either toward fulfillment of learning objectives or against these? One of these is surely the growth of a sense of autonomy -- of the feeling that one is an active and independent agent, able to control one's own behavior, and having some influence over rewards obtained and problems engaged in.

The counterpoint to autonomy is interdependence -- the development of differentiated relationships to other people. Autonomy and interdependence rest on one another -- the child comes to understand his strengths and abilities through seeing his effects on others, and can realize them only in the context of a network of relationships with people.

One aspect of the developing interdependence of children is that of their affiliation with others. The preschool child often appears to be oblivious to others as people, to relate to them just as to inanimate objects; by adolescence, on the contrary, the child finds one of his major motivations to be toward the acceptance and companionship of his peers. The identification with others -- having a sense of shared characteristics and common goals -- is likewise progressively important.

Interdependence need not imply total agreement; conflict and disagreement are at least as natural to human beings as are their opposites. What is important is that conflicts occur within a context which can accept them and where they can be fruitful -- where there is sufficient agreement on fundamentals, and sufficient acceptance of and by others, to allow meaningful dialogue; and where disagreement can occur without rejection and alienation.

This last might be expanded indefinitely; no small set of categories will encompass the features of social interaction which are significant for behavior in school or elsewhere. Here speculations are offered that reflect requisites for a productive classroom that appear to follow from these examples.

THE CONDITIONS THAT FACILITATE LEARNING

Most basically, the structures of classroom interaction should reflect the relational structures which are important for children. The typical classroom is a one-many communication network, where the teacher exercises the privotal position, and students respond as directed by the central agent. Children are in proximity to one another, yet are denied opportunity to interact; or rather, when they do interact it is outside the context of learning activities, behind the teacher's back. Goals that devellop are likely to be those of the group vs. those of teacher and institution; the former by definition must be disruptive and nonproductive.

Genuine interchange of ideas must be encouraged within the classroom. The tension that arises through conflict in views can be a major force motivating further analysis and broadening of perspective, if it occurs within a context of shared aims and acceptance of controversy.

There is need for student interdependence in striving for task fulfillment. If the individual has responsibility to the group, if students are allowed activity and autonomy as a group, then an acceptance of learning goals as their own, rather than as imposed from without, is facilitated. Not that student should always work in groups -- serious thinking is more often an individual than a corporate enterprise, and no one form of organization merits exclusive claim on classroom activity. The traditional teacher-class relationship, however, is probably less often appropriate for thinking than any other structure that might be devised.

One further note is particularly relevant to the social sciences. This is that the classroom, as a social system in its own right, can serve as a laboratory for the study of such systems. Here, as elsewhere, students need both to work through interactions and to formalize what it is they have worked through. With alternatives of social behavior seen concretely through his own and his classmates' behavior, the child will be better prepared for conceptualizing these processes.

The teacher's role may be seen as that of diagnostician and consultant for a social system in which he is also a vital participant; the less authority he must exert in maintaining the flow of classroom events, the better. If his behavior shows understanding and respect for intellectual inquiry, and if he can structure classroom activity in accordance with interactive tendencies that appear naturally there, the artificiality of learning for life in isolation from life need not prove insurmountable.

There is a variety of models available for conceptualizing what goes on in the classroom. No one is "right", and we cannot prescribe one that is best for the teacher in his role as a diagnostician. Just as the student needs many models in understanding social phenomena, the teacher needs to have many on hand for the phenomena he must guide. Here we will finish by suggesting several distinctions which may be useful in dealing with the communication which occurs in the classroom.

First we must contrast two kinds of knowledge -- what is known and can be specified in a formal way. The second is personal knowledge -- what a person knows in such a way as to be able to operate with it. Teaching needs to consider both ways of knowing. Discovery, through interaction with raw phenomena, gives rise to personal knowledge. But it often is informal, untested, of unknown validity and generality. It needs to be measured against established knowledge, to be brought into contact with formal statement and the possibility of critical examination.

What goes on in the classroom may be seen as a dialogue between personal and established knowledge. The teacher's role is to determine at what points the child needs raw encounters with data, at what points he needs to reflect these against what others have gained from their encounters, at what points formalization is needed. The process proceeds in cycles; the result of formalizing ought to be a new series of questions or uncertainties that lead back to more data.

Productive dialogue requires that channels of communication be open. The knowledge resources of a class fall into several categories. There is information which is public -- available to all as a basis for agreement and a starting point in argument. Other information is unknown but relevant. Finally, there is information possessed only by some members of the group. For the individual child some of this is secret information, possessed by him but not yet available to the group ; the remainder for him is blind, since others who can provide it have not done so.

The aim of communication in the classroom is to bring knowledge out of other categories and into the public domain. What is unknown can be reached by many paths -- through what the teacher knows, through books and other repositories of established knowledge, and through processes of discovery. What is less easily managed is knowledge that is only partially available. Here all of the interactional structures that can influence what is learned in the classroom once more become relevant.

In addition, what needs to occur in the classroom at any point in time varies with the subject, with the teacher, with learners, and with the interactions among all three. The best that can be done is to provide the teacher with all the resources we can, including models by which to conceptualize what is and what ought to be going on, and then to leave him free to work out the implications in any given situation -- to employ teaching as an art form to obtain meaningful learning and retention.

The utilization of these principles has significant implications for both the training of teachers and education research. Teacher training entails understanding of interpersonal dynamics as well as the acquisition of information and the use of mental skills. Thus teachers should be trained to be diagnosticians and evaluators of the social system of which they are as participant as well as to order and to use information. Training programs need to be developed which assist the teacher in (1) identifying instructional problems; (2) diagnosing and interpreting them; (3) developing and carrying out plans for change; and (4) evaluating the effects of intervention.

III. Definition of Terms:

1. a. Autonomy reflects some sense of maturing and strength. A sense of becoming a fully functioning person. Operationally we might say it is the organisms ability to control his own behavior (output) in such a way that he gets the inputs (satisfiers etc.) he seeks.

b. Interdependence is structural while interaction is transactional. Interdependence refers to qualities of interaction among persons. The relationships between two people interacting directly in a face to face situation is called interpersonal interdependence. The relationship between two people whose behavior changes their common environment and therefore changes each other's opportunities to obtain for example, autonomy, is functional interdependence.

c. Identification recognizes that people develop goals, expectations and wishes along with their relationships to other people, or conversely that other people whether real or imaginary, past or present come to be perceived as embodying ones hopes. What these people stand for survives (even if the people are no longer living) within our system of values.

d. Affiliation refers to psychic interdependence among people. Affiliation helps us cope with personal problems of anxiety, apathy, defences etc.

e. Organization refers to being a member of something and sharing common purposes and goals. Identifying with a group or a class, for example. If people are both functionally interdependent and affiliative, the recognition of their common goals provides the basis for organization (and all 3 of these conditions are usually violated in classroom groups.)

f. Conflict refers to whenever there are genuine alternatives. Such as conflicts in perceptions, values etc.

g. Tension arises out of patterns of conflicts. Conflict that exceeds that which we expect and cannot cope with in a traditional fashion or that we have not become habituated to produces tension. Conflict arises and the organisms will turn in one itself or it will turn outward through overt expression and action. Tension arises in the conflicts we cannot handle.

II. Tension can be expressed in various ways:

Biological--acting out
modification of habit
reorganization of behavior

It is the property of the whole organism to deal with tension. To organize itself for dealing with stress. The object of the education is to teach the learner to deal with stress through understanding. Reduction of tension has to involve consciousness. Tension reduction can come from internal as well as external sources.

III. Two types of knowledge: personal and established. Personal knowledge is the wealth of experiences that the learner brings with him to the classroom. Established knowledge is the stuff that one finds in books.

STANFORD UNIVERSITY
SCHOOL OF EDUCATION
SECONDARY TEACHER EDUCATION PROGRAM

Richard J. Shavelson

TEACHING and EVALUATION

I. The Problem
  A. For what purposes is evaluation useful to the teacher?
  B. What techniques are available to the teacher for evaluation?

II. Purposes of Evaluation
  A. Evaluation is the process of defining, obtaining, and using information to judge decision alternatives.
  B. Evaluation and Decision Making
    1. Decisions about students (most of a teacher's evaluation time is spent here).
    2. Decisions about instruction
      a. Effectiveness of teacher
      b. Effectiveness of instructional material
  C. Evaluation as Judgment

III. Techniques for Evaluation - Collection of Information for Decision Making
  A. Validity and Reliability
    1. Validity - the extent to which the technique collects information relevant to the decision to be made.
    2. Reliability - the extent to which the technique measures precisely.
  B. Functions of Evaluative Techniques
    1. Students
      a. Motivational
      b. Diagnostic
      c. Definitional - course objectives
      d. Differentiation and Certification (e.g., grades, successful completion of course requirements)
      e. Instructional Device
    2. Instruction
      a. Diagnostic
      b. Definitional - objectives
      c. Instructional
  C. Types of Evaluation Techniques
    1. Teacher-Made Achievement Tests
      a. Norm-referenced-decisions about individual differences (students).
      b. Criterion-referenced-decisions about instruction and students.
    2. Alternatives
      a. Published Achievement Tests
      b. Attitude Scales
      c. Unobtrusive Measures

IV. Evaluation of the EPDA Project.

Appendix E

Project Staff Resumes

Appendix E

Project Staff Resumes

Robert H. Koff, Project Director; AB (psychology), MA and Ph. D. (clinical and educational psychology). Professor Koff is Director of Teacher Education and a research and development associate, the Stanford Center for Research and Development in Teaching. His past experience includes research project director of the microteaching and data bank project, Stanford Research and Development Center. He is the author of numerous articles dealing with teacher education and is currently completing work on a book entitled: Interpersonal Dynamics in Instructional Systems.

Richard J. Shavelson, Project Coordinator; AB and MA (psychology), Ph. D. (educational psychology). Dr. Shavelson is a full-time staff member with an appointment to the faculty, School of Education, Stanford University. He is responsible for the training and evaluation of the instrutional teams, and for the general project administration. His past experience includes four years of research and evaluation at Lockheed, and research at the Stanford Center for Research and Development in Teaching (he is currently a Research and Development Associate at the Center).

Richard D. Beyer, Training Curriculum Development; AB (social studies education), MA (history), Research Assistant and doctoral student in Teacher Education, Stanford School of Education. Mr. Beyer works on the conceptualization and development of the training materials for instructional teams. His past experience includes 9 years of secondary teaching, 3 years as assistant principal where he developed curriculum materials in science, social studies and communications with instructional teams, a year of study as a John Hay Fellow in humanities at Harvard and a Fulbright grant to travel and study in India.

Carol A. Codori, Project Evaluation; BS (psychology), MA (educational psychology), Research Trainee, doctoral student in Psychological Studies, Stanford School of Education. Miss Codori works on the design, implementation, and analysis of the project's evaluation. Her past experience includes conduct of an evaluation of the University of Pittsburgh's Certificate Program in Child Care.

Annalee Elman, Training Curriculum Development; BA (mathematics and philosophy), secondary school teaching credential (mathematics and secondary education), Research Assistant and doctoral student in Psychological Studies, Stanford School of Education. Miss Elman works on the development and revision of training materials for instructional teams Her past experience includes 6 years of teaching at the high school level, and development of curriculum for a combined computer science/algebra course for high school juniors for the Protestant School Board of Greater Montreal.

Ethel Lichtman, School-Community Coordinator; AB (psychology). Mrs. Lichtman is responsible for assisting with linkages between the individual school, surrounding communities, and Stanford University. Specifically, she assists with and reports on interaction between instructional teams and 1) other staff in each school, and 2) parents and local communities. Mrs. Lichtman is employed part-time as school-community coordinator in STEP. Her past experience includes authoring a study of community relations, chairman of professional-citizen school district advisory committee, and organization of a local citizens' education organization.

Thomas Lorch, Training Curriculum Development; AB (English), Ph. D. (English), post doctoral fellow, School of Education, Stanford University. Dr. Lorch works on the development and revision of training materials for instructional teams. His past experience includes teaching and writing.

George N. Sousa, Project Evaluation; BA (psychology). Mr. Sousa is a research assistant and a doctoral student, Psychological Studies, Stanford School of Education. He works on the design, implementation, and analysis of the project's evaluation. His past experience includes graduate work in small group research and training.

Appendix F

"Mini-Proposals"
from
Participating Schools

MORE EFFECTIVE SCHOOL PERSONNEL USE
IRVINGTON HIGH SCHOOL
Fremont, California

January 1970

Irvington High School is a four year high school, enrolling approximately two thousand students, and is located in Southern Alameda County within the municipality of Fremont. It is one of four comprehensive high schools composing a unified school district.

Student body is composed of upper-lower class to upper-middle class students who score slightly above average on most standardized tests including the Iowa Test of Educational Development, the Lorge-Thorndike Intelligence Test, the Test of Academic Progress, and the California Physical Fitness Examination.

Sociologically, the Student Body is composed of 78% Caucasian, 18% Spanish-American, 1% Negro, 2% Oriental, and 1% other non-white.

Irvington has recently committed itself (1968) to a totally new curricular format which involves the inclusion of several three-day a week courses which are dove-tailed with two-day a week elective programs. Overall, the new curricular format has achieved a high level of acceptance on the part of students, faculty and community.

The staff is presently involved in a long-range study of other modifications which might lend greater flexibility in both a structural and curricular format. These would include recent observations of flexible scheduling at Oceana High School, (Pacifica, California), Mission San Jose High School (Fremont, California), as well as variations of block scheduling at Henry Gunn High School (Palo Alto, California) and Monterey High School (Monterey, California).

In addition, a large number of the staff have visited the learning activity project at Hughson High School (Hughson, California). They are presently in the process of discussing these variations and modifications as well as varieties of differentiated staffing patterns.

Irvington High School

The specific proposal involving the MESPU combines aspects of differentiated staffing and inter-disciplinary instruction. The essential premise is a structuring of an instructional team involving master teachers in the area of Science and English at the ninth grade. In addition to the master teachers, there would be assigned to each of these instructional teams one yeoman teacher and two Stanford interns, and paraprofessional.

Both of the master teachers, Mr. Robert Tierney (Science), and Mr. Earl Curran (English) are teachers of extended experience in their subject areas (see Appendix A).

The yeoman teacher concept is related to the idea that we have, in fact, several 4th and 5th year teachees who have all the potential of becoming master teachers and who would relate directly with this format during its expansion in the 1971-1972 school year.

Each of these instructional teams, then, would be assigned randomly 180 freshman students. Their program would be scheduled so that the meetings of the class would be contiguous, thereby allowing in actuality a two-hour block of instructional time. They would be housed in a large group divisible instruction area with several smaller rooms also assigned to them.

The yeoman teacher and interns would have responsibility for the conduct of classes designed for the average students assigned in this class. That is, those students who statistically fall within a normal achievement, attitudinal and intellectural range.

It is assumed that approximately 140 of the 180 assigned students then would be assigned to large group instruction with the major teaching responsibility on the yeoman and intern teachers. Master teachers would have the obligation of coordinating, supervising, directing and demonstrating from their wide array of instructional techniques, but the bulk of the class activities would be the direct responsibility of the yeoman and intern teachers.

Those students who fall at the outer ranges of the normal distribution; i.e., the exceptionally capable student and the below-average student would be the direct responsibility of the master teacher with some assistance from the interns. The differentiation, then, within this format would in fact be based upon the ability levels of students and not the particular predisposition of the instructors.

Those students at either extreme, approximately twenty in each group, would be placed on individual instruction patterns devised, monitored, and evaluated by the master teacher.

The initial objectives of this particular plan would include all of the guidelines spelled out by the present criteria of the MESPU concept. That is, it would indeed assure a thorough-going exploration of better staff utilization at the same time that it would establish meaningful experiences for the yeoman as well as the intern teacher.

The second leg of this two-pronged attack is specifically within the area of interdisciplinary instruction. Close coordination between master teacher and members of their respective instructional teams would be absolutely essential.

The program is delineated and specified in the ensuing description. However, generally, the master teacher and the principal have discussed such areas as the composition of scientific reports, science fiction as a literary form, science in the history of literature, oral communication, and scientific principles, vocabulary building and communication systems for the future.

The time allowance within the central block would be detailed by the instructional teams, that is, it would be possible for a student to receive no English instruction as such in a given time block because of the need to demonstrate a scientific principle through a laboratory experience.

On the other hand, it is possible that on certain days that the class would meet there would be no Science instruction, as such, however since both teaching teams would in fact be assigned to each of the period meetings of the class, genuine flexibility in [illegible]ns of instructional intent can be guaranteed. The master teacher would have responsibilities for monitoring and evaluating both teacher and student performance in the larger group at the same time that he has direct responsibility for those students of exceptionally high or exceptionally low ability. The evaluation process would involve a rather precise pretesting cycle during which students enrolled in both the areas of Science and English would be tested.

In addition to this academically oriented testing program, attitudinal scales about student's perception of what Science is and with what it deals would be carried on as would such analysis of students' attitudes toward English. Beyond that, the relationships upon which the course is premised would also be pretested in terms of student awareness of the various inter-related dimensions of the two disciplines. The academic testing could very well focus in use of sub-tests of the Iowa Test of Educational Development, the Preliminary Scholastic Aptitude Test, and other subject-oriented instruments. The attitudinal scales would need to be developed to measure very precisely the impact of this sort of inter-disciplinary instruction on student's ability to integrate the separate subject areas.

February 17, 1970

A PROPOSAL FOR THE UTILIZATION OF AN INSTRUCTIONAL TEAM AT GIANNINI JUNIOR HIGH SCHOOL FOR THE TEACHING OF GENERAL MUSIC AND VOCAL MUSIC

Giannini Junior High School is located in a predominantly white neighborhood but the student population is racially mixed, with a number of students bussed from the Haight-Ashbury District, which is predominently minority, especially black. The white enrollment has been decreasing each year.

The general music classes reflect a larger minority enrollment, usually around 35-40%. Most of the students in the beginning general music classes (a required course in the 7th grade) are low achievers since most of the high achievers have had instrumental music experiences in elementary school and are placed in instrumental music classes as a continuing experience. Since the enrollment in the general music class is often an economic reflection of the parents inability to afford instruments and private instruction in the earlier years, most of the general music students have no instrumental music background at all. Thus the student without the necessary musical background is placed in the general music class and the dominant attitude of the student is usually negative towards music and often towards school.

The school faculty and administrators have for the most part discouraged student participation in activities and assemblies for performance. One reason stated is the unruly behavior of the student audience. A core of faculty members as well as the administration have been instrumental in trying to change attitudes toward student participation. The principal is particularly concerned about improving student attitudes toward the performing arts. One of the functions of the instructional team will be to become involved with this problem.

OBJECTIVES - BY WHICH THE SUCCESS OF THE PROGRAM WILL BE MEASURED:

1. To improve pupil attitudes toward music and toward school

OBJECTIVES - BY WHICH SUCCESS WILL BE MEASURED

2. To improve enrollments in elective music classes
3. To improve pupil performance in general music classes so that by the end of the year they will be able to --
    - a) recognize types and styles of music, both instrumental and vocal -- traditional and contemporary --
    - b) read simple melody at sight and sing it
    - c) understand and perform basic theory skills (chord structures)
    - d) function as an attentive and responsive audience at school assemblies
4. To develop curriculum by experimenting with various instructional methods and determining their effect with this fairly typical urban school population. There is much discussion as to what are desirable methods in music instruction but little concrete proof about which methods are effective or appropriate for students of varying backgrounds, interests, and abilities.
5. To develop closer relationships between music and humanities, i.e. **Drama**, English, foreign languages, and social studies.
   (Drama)
6. To explore the advantages and feasibility of flexibile differentiated staffing for the entire music department of a large city school system.
7. To disseminate information about this experimental project to other teachers in this school district and to the community; and to get feedback and suggestions in an attempt to obtain broad community and staff support for improved music instruction.

(1) THE PROGRAM

Participants

The instructional team at the school will be headed by Mr. Robert Landis, who is jointly nominated by Dr. Albert A. Renna, Director of Music of the San Francisco Unified School District, and Professor Wolfgang Kuhn of the Stanford Music Department to fill the role of STEP associate. Mr. Landis' qualifications are appended to this proposal. He has jointly developed this proposal with Dr. Albert A. Renna, Mr. Alfred D. Beseman, and Mr. Dan Ryan of the school district music department, and Dr. Wolfgang Kuhn of Stanford University. Mr. Landis will work with Stanford staff this spring to plan initial curriculum, evaluation procedures, and summer activities for the interns. He will also participate in the summer training experience, and in workshops at Stanford throughout the year with STEP associates from other school districts.

Mr. Landis will be joined on the team by three (3) Stanford Interns jointly selected by the STEP staff, Dr. Kuhn, Dr. Renna, Mr. Beseman, Mr. Ryan, Mr. Landis, and Mr. James Hannon, principal. Criteria for selection will be special competence in one or more musical skill areas and desire and potential for working effectively in a team effort.

Dr. Wolfgang Kuhn, Professor of Music and Professor of Education, will continue to help plan the project this spring, and will teach Curriculum and Instruction in Music during the summer. From September 1970 until June 1971, Dr. George Kyme, Professor in the Stanford Music Department, will be responsible for curriculum and instruction. A Stanford candidate for the Ed. D with experience as a qualified music teacher, will act as the curriculum evaluator and will assist in training and supervising the interns.

(2) THE CURRICULUM

(a) The coordinated team will teach general music to the entire 7th grade, to elective 8th grade general music classes, 9th grade vocal music classes, and in addition the team will work with various performing ensembles such as the Boys Chorus, Girls Chorus, Madrigal Groups during the lunch periods and after school. The actual periods involved will number no more than five (5), not including the volunteer student groups meeting during the noon periods. These groups usually meet the last 25 minutes of each lunch period. The actual teaching period contacts for each intern will probably be between ten (10) and twenty (20) periods each week. The periods each intern will teach will depend on the materials to be covered and the method to be used. This in no way implies that each intern will be solely responsible for teaching of any one class.

The seventh grade classes will not number more than 32 students, whereas the other groups may average more or less depending upon the elective schedule.

The advantages of the elective and performance group experiences for the interns will be:

-- an opportunity to recruit new students into various parts of the general music-vocal program by both contacting the students and parents

-- an opportunity to involve the community of both the Sunset District and the Haight-Ashbury District through the presentation of music programs and demonstrations

(b) -- An attempt will be made to schedule classes more often than two or three times a week.

(c) KODALLY and ORFF METHODS will be experimented with to determine their effectiveness and adaptability to Junior High music instruction. For instance, Orff rhythms - using drums, passing around and answering back and forth - have potential for motivation and skill building at this level.

Recorders and guitars will hopefully be available.

(d) The C & I course will focus on:

-- how to teach basic music skills to junior high students

-- the effect on pupil performance of a team approach to music teaching

-- how to relate music curriculum to curriculum in other areas

THE CLASS will be held in San Francisco, and will include other music teachers and upon occasion teachers from other departments.

(e) Interns will participate in the summer program at Stanford including microteaching, C & I, and crisis lab, and at the same time be introduced into the school and community where they will be teaching through the Summer School Music Advancement Workshop program. From September to June they will commute to the Stanford campus for regular classes in addition to the teaching assignments in San Francisco.

(f) The team will attempt to improve motivation in the complete music program of the selected school. Particular emphasis will be given to improving student ability to critically listen and control themselves in an audience situation.

(g) ThePrincipal has expressed his intention to use the team in helping to expand a humanities approach to teaching. Consistent with this, the plan is to schedule the interns time so they can have enough contact with faculty in other departments, i.e. drama, English, foreign languages, social studies, and to relate the music curriculum to these areas.

EXAMPLES:

-- create a musical production out of material developed in English classes

-- improvisation in choral group could be based on literature being used in English classes

-- music in social studies and languages

(2) CURRICULUM
continued

(h) The District plans to provide and integrate with this project the following services:

-- The San Francisco Symphony will be used to provide a Chamber Concert and workshops

-- The Western Opera Theater will be used to provide a performance and workshops

-- The Young Audiences Ensembles will be used to provide several performances and discussion sessions

-- Guest lecturers will be provided in the field of music and the humanities.

(i) BUDGET

A major part of the $3,000. fund (at $1,000. per intern) will be used to purchase additional special instructional materials, supplies, and services that could reinforce the team effort.

A flexible use of funds disbursed by the Stanford University STEP program will enable the team to carry out the program.

The following equipment and supplies are suggested in order to carry out the program as proposed at this time: (Estimated Costs)

-- 1. Audio equipment	$ 500.
-- 2. Recordings for the teaching of general music	$ 300.
-- 3. Plastic Piano Keyboards	$ 90.
-- 4. Bicinia Hungarica, Vols. I-IV, - Kodaly	$ 160.
-- 5. Music for Children Vols.I-II-III-IV-V: Orff	$ 200.
-- 6. Recorder Class Books	$ 50.
-- 7. Bass & Tenor Recorders	
...2 Tenors	$ 35.
...2 Bass	100.
-- 8. Professional Materials, Texts, and Visual Aids for above programs	$ 200.
-- 9. Para Professional, Part time	$ 500.
--10. ORFF INSTRUMENTS	
..Diatonic Sopranino bells	16.10
..Diatonic Soprano Bells	21.25
..Diatonic Soprano Xylophone	69.96
..Diatonic Alto........ Soprano Marimba......	79.10
..Timpani	90.50
..Diatonic Bass- Tenor Marimba........	116.95
..Diatonic Alto-Soprano Bells	65.35
.......12" drums	24.00
.......10" drums	21.00

(i) BUDGET
continued

-- 10. ORFF INSTRUMENTS
continued

..Paiste gong	$ 33.00

-- 11. Guitars	$ 1000.00

(j) Advisory Council

An Advisory Council, including parents, students, teachers, and administrators, already exists at this school. Each part of this group will act as an advisory board to the team, and will be kept informed about its objectives and activities. Plans will develop as to the specific nature of this involvement, including:

-- visits or workshops at the summer training program at Stanford

-- recruitment of talent from the San Francisco cultural community to demonstrate and talk to students about personal interest in music, and possibly plan for activities such as back stage visit to the opera and the symphony. San Francisco is rich in such resources.

-- planning and presenting one or more programs in the area from which some students are bussed

-- improving process by which new teachers are introduced into the social and political setting at school

(k) In the spring, the team will prepare two reports covering these areas:

(1) How they functioned as a team. The kind of problems they had both within the team and with the school and community, and how problems were resolved. What would they do differently if given another opportunity?

(k) continued

(2) What curriculum they developed or what existing curriculum was modified in particular ways and what effect it had on increasing pupil achievement. What students have learned. Guidelines for pupil achievement.

(3) RATIONALE AND STRATEGY FOR A DIFFERENTIATED STAFFING APPROACH TO MUSIC INSTRUCTION

Because music teachers tend to be specialists in certain areas, does functioning as a team enhance learning opportunities and performance of students and the professional satisfaction of teachers? Under the present system, a student can go through three years of music and get a lot of exposure to some areas and none to others. Because music is already broken down by specialized areas, there seems to be no reason not to push this specialization further - both in terms of salary compensation and in terms of kinds of skills necessary to teach in different music areas. A single or inflexible salary schedule does not permit teachers to be reimbursed for their instructional effectiveness on the basis of the competence they demonstrate. This project, therefore, intends to explore differentiated roles from beginning teacher to the more experienced positions in supervision, curriculum design, team leader.

Differentiating roles within the team will also be explored, both in terms of competence in specific music skills, and in instruction techniques (lecture, tutoring, curriculum design, group dynamics).

(4) INSERVICE COMPONENTS

-- C & I meetings held in San Francisco will relate progress of team to other interns and master teachers

-- All the general music teachers in the school system will be called together during the course of the year to discuss the broad implications and specific advantages of the team approach

(3) INSERVICE COMPONENTS continued

-- Demonstrations and performances will be given to communicate the program to the general school staff, parents, and members of the community

-- Ideas and procedures for formalized In-Service Training of supervisors and teaching personnel will be organized for implementation in Spring 1971

-- If there is a maximum of success in terms of pupil achievement the objectives and techniques used to implement the program may effect change in the entire approach to general music in the SFUSD

EVALUATION

The evaluation of the program will be a continuing process, and since an evaluation in depth will be essential to the success of the program, its evaluation will be set upon the most objective base possible.

As curriculum plans are organized the specifics of the evaluation procedures will be developed to measure changes in attitudes and skill development.

CHANGE IN ATTITUDES might be expressed in the following ways:

1.) willingness to participate in volunteer groups
2.) responsibility towards attendance at school performances
3.) desire to continue and participate in future music programs
4.) development of broad musical tastes by interest displayed in various styles and types of music

PERFORMANCE EVALUATION WILL INCLUDE THE MEASURING OF PERFORMANCE CRITERIA, FOR EXAMPLE:

At least 70% of the 7th graders should be able --

a) to sight read a simple melody by Sol-fa syllables, by humming it or playing it on a recorder

PERFORMANCE
EVALUATION
continued

b) to identify and play basic I, IV, and V chords on the piano or guitar

c) to clap or tap simple rhythmic exercises

d) to identify various styles and forms of musical recordings

e) Students will be asked to keep a journal or notebook on classwork and outside performances

f) Be able to communicate basic musical vocabulary used in class and in texts to be used

i) to explain basic standards of audience behavior for various types of performances

An attempt will be made to determine generally whether a group of students who have had the experiences discussed above perform better, the same, or worse than other similar students in other general music classes. For this evaluation control groups being considered are:

(1) classes in another school with similar student population but without the team approach

(2) another class with similar student population at Giannini not being instructed by the team

SAN JOSE UNIFIED SCHOOL DISTRICT

SAN JOSE HIGH SCHOOL

MESPU PROPOSAL

2/16/70

SAN JOSE UNIFIED SCHOOL DISTRICT

MESPU Proposal

I. DESCRIPTION OF SAN JOSE HIGH SCHOOL

San Jose High School is situated close to the core area of the City of San Jose. It is one of the oldest high schools in California, founded in 1863, but its present plant was built in 1952. Though its design won an architectural award at that time, today it is obsolete in terms of recent educational developments, such as team teaching, resource centers, etc.

San Jose High School draws from an area and population characterized by conditions found all too frequently in urban school areas throughout the country.

Some of these conditions are:

A. A disproportion of ethnic minorities, which according to State Department criteria make the school racially segregated. *(San Jose High's student body is 61% Mexican-American, 7% Oriental, 5% Black, 1% other non-white, 26% other white.)*

B. Median income is $4,000.00 *(34% or 475 students of the student body are on A.F.D.C.)*

C. Unemployment rate is 8-10%.

D. Approximately 20% of housing is sub standard.

E. Recreational areas, parks and playgrounds are limited.

F. Commercial developments are deteriorating; many of the more stable businesses are moving to the suburbs.

G. Crime rates are the highest in the city.

H. Public transportation is inadequate and costly. *(A number of San Jose High students have to rely on it as the district provides no busses for San Jose High School.)*

II. THE EDUCATIONAL PROBLEMS

Needless to say, many students at San Jose High School suffer from the effects of these environmental conditions. However, they also suffer from the fact that historically the school has done little to compensate for the disadvantages such conditions create. More over, the typical school with its middle class values and mores is seen by many of these students as an alien place where not only do they have difficulty succeeding but on a more basic level, even have difficulty feeling that they belong. In school these problems manifest themselves as follows:

A. Among students

1. Excessive absenteeism *(20% daily average, more than twice that of a suburban school.)*

2. Frequent cutting of classes.

3. Apathy and lack of energy *(of a recent sample of 100 students taking physiology, over 75% of the students consumed less than 1500 calories daily!)*

4. Basic skills severly under developed *(Student body reading level ranked between the 11th and 20th percentiles. Other achievement levels almost equally depressed.)*

5. Irrelevance of much of the curriculum *(Students see little applicability of many of the things offered in school.)*

B. Among the Staff

1. Culture shock among new teachers indicates severe deficiences in teacher training programs.

2. Morale of experienced teachers indicates they need new ideas, materials, in-service training, insights from professional research that teacher training institutions may have access to.

3. Additional staff and specialists are needed to individualize instruction, assist with special problems beyond the training of the classroom teacher.

4. Time is needed to study problems and organize available teaching talent in ways that maximize their effectiveness.

III. THE PROPOSAL

A. Major Goals of the Proposal

1. To provide, by using the $4,000.00 received from Stanford for training interns, for the basic needs perhaps not otherwise fulfilled in the students' home, specifically such things as breakfast and lunch, safety and security *(at least at school)* acceptance and caring, transportation to school, etc.

2. To remedy deficiencies in basic skills and background.

3. To develop more effective teaching strategies, curriculum and teacher competence for the student who lives in a urban environment.

4. To have students display more energy, more interest in class activities, more participation.

B. The Specific Objectives of the Proposal by Which Success of the Program Will be Measured are as Follows:

1. To have the group under treatment average at least two years growth in reading in one year.

2. To have achievement in other language skills, social studies, science and mathematics average at least one years growth in one year.

3. To have absenteeism among the treated group be reduced to an average of 8 - 10% of the group each day, as opposed to a 20% average among the general student body.

4. Reduce cutting of classes to a group average of no more than five cuts per student per semester.

5. To have students apply what they learn in problem solving situations.

6. To have students raise their achievement to levels of minimum competence as described on performance tests.

C. Instructional Strategies for Achieving Stated Objectives

1. Attempts will be made to fund free breakfast and lunch and vitamins daily for students in the program. The district doctor will also conduct medical and dental examinations. Although this is essentially a service rather than a strategy; it is still a strategy in that besides the obvious premise for providing this service -- that a well-fed, healthy youngster can learn more effectively than a badly nourished, unhealthy one; there is also the intent to provide incentives for better attendance and participation in the program.

2. The curriculum will be based on the practical skills and knowledge needed for living in an urban environment, i.e., practical law, practical economics, practical medicine, community organizations, etc.

3. Instruction will begin with the concrete and move to the abstract, as recommended by Reisman. The concrete will include examples from student experiences, environment and cultures. Therefore, classes will go out to the community frequently. Also, in-service training of the staff related to the life-sytles, cultures, language and symbols of the community will be planned.

4. Cooperative teaching: Teachers will function as a team. Though they will have their own classrooms, teachers will plan together, do case conferencing, coordinate activities, etc., in order to maximize the learning and reinforcement of the curricula. For example, all teachers will teach reading in their subject area.

5. Some of the teachers, perhaps all, will assume counseling roles and responsibilities for students in the program. They will assist students with programs, career exploration, personal problems, etc.

6. Physical education in the form of games or a recreation period will be provided within the program. The purpose of this is to enhance positive group feelings and perhaps develop a benign competition between classes in the program that will hopefully transfer to a benign competition in improved attendance, achievement, etc.

7. Heterogeneity will be built into the program. There will be four groups of thirty-six students in the program. Eighteen students in each group will be of average or higher achievement. Eighteen will be selected for the severity of their learning problems. The intent of this is to avoid the "dummy class" stigma so often associated with remedial programs. Another intent is to provide models of good learners in the class for those who are not. Of course, the able students will assist the less able as group caring for one another develops.

8. One or more members of the team may be bilingual parents from the community. They will function as community liaison and special counselors.

9. Induction of new staff: Each intern develops confidence to handle one half of the group as a class by himself. The intent of this is to

   a. Provide the intern with an easier transition to teaching.

   b. Provide the two teachers with flexibility to work with different size groups.

D. Staff

1. Four experienced teachers -- one English, one social studies, etc. Roles are: to serve as resources and trainers of their intern partners; to teach in the program; to develop curriculum and instructional strategies; to tutor, counsel, conference with students in the programs; to demonstrate instructional strategies; discuss curriculum ideas with other school staff.

2. Four Stanford interns. Roles are: to learn practical skills of class management; to bring latest ideas, methods, materials from STEP program and through the program into the school; to explore roles other than classroom teacher, i.e., counselor, tutor, community analyst, etc.

3. One parent. Role is: to visit homes of students and involve parents in education of their children; to serve as special informal counselor; to provide program with understanding of the community; to work as teacher aide in the program.

4. Two STEP associates. Roles are: to supervise interns. To help train program staff; to serve as liaison with rest of faculty; to help with implementation of program ideas school wide.

5. Four Stanford supervisors. Roles are: to supervise interns; to consult with STEP associates and program staff.

6. C & I staff and other STEP personnel. Role is: to serve as consultants as needed.

E. Description of the Program

The program will involve four groups of thirty-six students each, a total of 144 students. These students will be scheduled into a four or five hour block in which they will take English, social studies, mathematics, science, reading, and possibly physical education. Assigned to teach these subjects will be four experienced teachers and four Stanford interns. Each intern will be paired with an experienced teacher in the same field. Each teacher-intern pair will work with thirty-six students per hour, as the groups rotate through the particular subject they teach.

The purpose of the pairing is to provide each intern an experienced teacher as a resource person. They would begin teaching a group of thirty-six, but after the intern develops confidence and class management skills, the group would be divided so that each takes eighteen students. Other intentions of this paring are:

1. Pairs could plan cooperatively and vary size of the groups they work with as needed.

2. It provides a gradual transition into the teacher role for the intern.

3. It provides a teaching model for the intern.

4. The experienced teacher may benefit from the ideas, reading, training the intern gets in STEP.

Heterogeneity, as determined by achievement test scores and grades, is built into each group. Each group of thirty-six consists of eighteen able students and eighteen with learning problems. Reasons for this are explained in the instructional strategies.

Teachers in the program would not have other assignments. Each would teach three classes, counsel, tutor or conference with students one period and meet with the team to plan and coordinate activities, develop curriculum, etc. two hours.

The reading class emphasizes a study skills approach to reading instruction. The instruction is conducted with the books and materials used in other classes. The primary function of this class is to prepare the less able students to function in their other classes. This time would also be used by other teachers to counsel, conference with or tutor students.

During the reading period, able students could take other electives, or they could volunteer to tutor those who need it.

Team meetings and planning are to emphasize cross-discipline coordination. Consequently, class schedules would be flexible. On a given day, all 144 students might hear one speaker at the same time, and hold small group discussions for the whole four hour block.

F. In-Service Training of Staff

One of the common complaints of teachers regarding in-service training and curriculum work is that it is either done after school or that it interferes with and desrupts the school day. Next year, 1970-71, San Jose High School hopes to adopt a daily schedule that will have time for these activities built into it. Teachers will have at least four hours, most five hours, per week for in-service training and curriculum development. At least twice per week, all staff will be free for an hour at the same time for staff-wide in-service training.

Whenever appropriate, consultants or other in-service training provided for the program, will also be made available to the staff. In a very real sense, the proposal is a type of action research. A variety of teaching strategies, staff differentiations and roles are being tested. Those demonstrated to be productive will be implemented as widely as needed. This will of course necessitate training of those staff members who adopt such ideas, probably by their colleagues, those who piloted the program.

Other specific procedures for in-service training of staff will be as follows:

1. Other staff will be invited to observe activities in the program from time to time.

2. Workshops in the design of behavioral objectives, performance criteria, and various instructional strategies will be offered to the staff.

3. Program staff in-service training will be opened to all staff when feasible.

G. Student Involvement

A. Student participation in the development of this and other programs will be done as follows:

   1. Student committees, paralleling faculty and parent committees will be organized by the student government. These are curriculum, student-faculty relations, student-community relations, student behavior.

2. Members of the committees will be elected and chosen in such ways as to assure representation of a real cross-section of the student body.

3. Initially, students will develop recommendations for areas to which committees address themselves independent of faculty and parent influence. Those will then be discussed with faculty and parents and developed together in final stages.

H. Community Involvement

A committee of teachers is presently organizing a parents advisory board. Representation of the board will be developed as follows:

A. San Jose High attendance area will be divided into fifteen sub areas of about one hundred families each. Each sub area will be represented by two parents who live in that area. One teacher will work with each of these areas and serve as a resource person and liaison with the school. Parents will be appointed the first year and elected thereafter, once the area is organized. These thirty parents will serve as an advisory board to the principal. They and others from the community will participate in the development of all programs at San Jose High School.

B. Community organizations and specialists in it will also be included as their special services or competences are needed.

I. Evaluation

An experimental design involving a control group will be developed in consultation with staff from Stanford University. This is in order to sort out the effect of the numerous variables in the program. Evaluation of the program will attempt to develop hard data measuring the amount of progress toward each objective. To make the relationship between the objectives and the evaluation procedures as explicit as possible, each objective is restated below, followed by a description of the procedures for evaluating it.

1. The objective: to have the group under treatment average at least two years growth in reading in one year. Evaluation: to be measured by pre and post-tests on a standardized reading test.

2. The objective: to have achievement in other language skills, social studies, science and mathematics average at least one years growth in one year. Evaluation: to be measured by pre and post-testing on a standardized achievement test. Also by pre and post-testing on local tests constructed to measure specific objectives of the program's curriculum.

3. The objective: to have absenteeism among the treated group be reduced to an average of 8 - 10% of the group each day, as opposed to a 20% average among the general student body. Evaluation: to be measured by comparing the daily percent of absenteeism among the group under treatment against that of the student body. Also by comparing incidence of absenteeism among the treated group in the 10th grade against the incidence of the 11th grade.

4. The objective: to reduce cutting of classes to a group average of no more than five cuts per student per semester. Presently students are considered chronic cutters if they cut more than once for each subject taken.

5. The objective: to have students apply what they learn in problem solving situations. Evaluation: to be measured by performance criteria evolved from problem-situations designed for instruction.

6. The objective: to have students raise their achievement as measured by grades based on performance criteria to a 'C' or better average. Evaluation: to be measured by computation of grade point average. Grades to be determined by evaluating students on performance criteria.

7. The objective: to have students display more energy, more interest in class activities, more participation. Evaluation: to be measured by observations in each teachers journal, each teacher will write a short synopsis of each students behavior, growth and performance at the end of each semester.

Appendix G

Budget

Appendix G

Budget

The Educations Professions Development Act (EPDA) under the United States Office of Education has provided the major source of funds for the Instructional Team Project. The grant was for $115,000. The funds are allocated in the following manner:

1) Fellowships for interns,
2) Stipends for STEP Associates,
3) One full-time staff member,
4) $3,000 per team to assist unique team teaching needs
5) Monies for training (e. g., microteaching, Group Processes Problem Solving Protocol Materials).

Additional sources of support are the Graduate School of Education through the Secondary Teacher Education Program and the Stanford Center for Research and Development in Teaching.